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JURY TRIAL  
JULY 31, 2023

CHRONOLOGICAL INDEX

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1 MONDAY, JULY 31, 2023

2 (The following proceedings were had in the presence  
3 of the jury:)

4 MR. ELY: Morning, Your Honor.

5 THE COURT: Good morning.

6 MR. ELY: Ready for our first witness?

7 THE COURT: I am.

8 MR. ELY: We call Dr. Robert Schroeder.

9 ROBERT SCHROEDER, being duly sworn by the courtroom deputy,  
10 testified:

11 DIRECT EXAMINATION BY MR. ELY:

12 Q Good morning.

13 A Good morning.

14 Q Can you please state your name for the record.

15 A Sure. My name is Robert Alan Schroeder.

16 Q Dr. Schroeder, where do you reside?

17 A Minneapolis.

18 Q Okay. And what is your present occupation?

19 A Well, I'm a fire material scientist as well as a fire  
20 investigator.

21 Q And do you have a business; you have an employer? Who  
22 do you work for?

23 A Myself. Sole practitioner.

24 Q Okay. And just for -- generally speaking, can you tell  
25 us with regard to -- what do you do in that field that you --

614

1 the materials and fire science?

2 A I analyze buildings, ships, aircraft, large commercial  
3 structures, industrial structures after they've experienced an  
4 explosion or a fire, and I look at the construction. I look  
5 at the maintenance. I look at the history. I basically do a  
6 building autopsy.

7 I look at the historical records of the building. I  
8 look at data. I understand the materials. I understand all  
9 the elements of it, and then I do the total analysis.

10 So I like to say it's a coroner versus a medical  
11 examiner. A coroner does not have to be a doctor. A medical  
12 examiner does. There's various similarities. I'm the medical  
13 examiner.

14 Q And how long have you been investigating fires?

15 A Full time since 1979.

16 Q Okay. And did you do any fire investigations prior to  
17 that?

18 A Well, for the military, I was a certified fire  
19 investigator by the Air Force in 1975, but we don't like to  
20 have fires in the military. So I did spend some time with a  
21 local fire department. But otherwise, no.

22 Q And have you also been a firefighter?

23 A Oh, yes. That's how I started out.

24 Q Okay. Can you tell us about your experience as a  
25 firefighter, where you were active as a firefighter and when?

1 A Sure. In 1972, I went in the military, went in the Air  
2 Force, the Air Guard. I was trained as a firefighter and  
3 crash rescue firefighter, and I had that role until '79.

4 In the interim, I also went to college at Oklahoma  
5 State University and was a firefighter on the Stillwater Fire  
6 Department. So I literally lived in the fire station and  
7 responded when the bells rang. Ultimately I finished riding  
8 the big red trucks in 1986 and '87 for a suburban department  
9 in Minneapolis, the Minnetonka Fire Department.

10 So I quit riding the big red trucks in the end of  
11 1986.

12 Q And you mentioned your time at Oklahoma State. So  
13 the -- go ahead and tell us about your educational background  
14 starting with Oklahoma State, if you would.

15 A Sure. At Oklahoma State, I was in a program, a fire  
16 protection -- fire protection and safety program. In '77, I  
17 received an Associate of Science degree in fire protection.  
18 In '78, I received a Bachelor of Science degree in fire  
19 protection and safety engineering technology while I was at  
20 OSU.

21 Q Okay. And after you came out of Oklahoma State, what  
22 were your career choices that you had, and what did you take?

23 A Sure. I could have been an industrial hygienist. I  
24 could have been a safety professional. I could have been a  
25 fire chief or a fire command officer, and I chose to go into

1 fire investigation.

2 Q Okay. What year was that?

3 A '79.

4 Q Okay. And at some point, you went back to school to get  
5 a master's degree; is that correct?

6 A I did. I like to call it my midlife crisis. At age 37,  
7 I decided that it was time to get retooled, and I went and got  
8 a master's degree, Master's of Science degree at University of  
9 California-Berkeley in mechanical engineering.

10 Q Did you study in any other schools at Berkeley while you  
11 were getting your mechanical engineering degree?

12 A Oh, I did. I spent an awful lot of time in the  
13 Department of Natural Resources dealing with wild land fires,  
14 not only taking courses and participating in prescribed  
15 burning, but ultimately I had the honor to be the TA for  
16 Dr. Martin, who was one of the really early innovators on wild  
17 land fires.

18 I also studied in the School of Information Sciences  
19 looking at data and how to understand data and in civil  
20 engineering looking at materials.

21 Q And after you received your master's degree from  
22 Berkeley, did you pursue a Ph.D. at Berkeley?

23 A I did. I ultimately got a doctor of engineering from  
24 Berkeley, and that department was -- I moved from mechanical  
25 now to civil environmental. And my work there dealt with

1 materials: Construction materials, concrete, plastics, wood,  
2 the whole array. Ultimately my doctoral dissertation was  
3 post-fire analysis of construction materials. So the fire  
4 element of my life has never left me.

5 Q Okay. And are you still active as a fire investigator?

6 A Well, on April 21st, I decided that it was -- 51 years  
7 in the business is enough. So I'm on approach -- I'm on final  
8 approach, if you will.

9 Q So in your 51 years in the business, how many -- you  
10 have an estimation of how many fires you've investigated?

11 A The number is between 2,500 and 3,000.

12 Q And can you tell me, just so we can understand the scope  
13 of your investigation, as between cause and origin and other  
14 aspects of a fire, what do you focus on?

15 A Well, the cause and origin is always a critical element  
16 of this, but then why did the fire spread, what was being  
17 given off by the fire, why did the building suffer so much  
18 damage, the fire dynamics, what's happening, what's happening  
19 to adjacent structures.

20 Q So tell us when you were hired in this case and what you  
21 were charged with doing.

22 A I was hired, I believe it was, the 11th of July 2020.  
23 And I was asked by you to assist in the investigation and the  
24 analysis of this fire, what took place, the fire dynamics, how  
25 everything was impacted.

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1 Q And in that capacity, can you give us a general idea of  
2 the kinds and amount of information you've reviewed in  
3 arriving at your opinions in this case?

4 A Oh, my gosh. Hundreds of thousands of pages of  
5 documents, complete building plans, thousands of photographs;  
6 some taken by me at the scene, thousands taken by others. The  
7 fire department records, and there were videotapes made both  
8 by security cameras as well as individuals. Weather records,  
9 historical records; as they were building the building, the  
10 communiques between the architects and the people on the  
11 ground, the squawks, the comminques between the city of  
12 Birmingham building inspectors and the people constructing it.  
13 It just goes on forever and ever.

14 Q Okay. And as part of that, you mentioned videos. Were  
15 you able to obtain a security video and review that with --  
16 that shows the fire?

17 A Yes, I did.

18 Q Okay. How long is that video?

19 A Well, if you include the time before the fire, I think  
20 we start rolling the video at about 9:30 that night prior to  
21 the fire the next morning at 0037. So there are, I think, up  
22 to nine hours of security video that I've seen.

23 Q Okay. And can you tell us how you examined that video  
24 and broke it down?

25 A Sure. Once I got into the timeframe of the discovery of  
619



1 the fire, I then took the video and had it dissected down  
2 frame by frame by frame. So that's 30 frames per second, and  
3 you can go through and really get a feel for what's going on.  
4 By moving through those frame by frames, you're not going one  
5 second and then another second, but moving quickly through  
6 them, but much slower than the video's rolling, and it gives  
7 you great detail. You learn a lot about things that you would  
8 never see just watching the video roll.

9 Q And in preparation for your testimony today, did you go  
10 through and capture segments of the video as opposed to  
11 playing the entire four hours?

12 A Yeah. We're not going to be playing nine hours of video  
13 today, folks, no.

14 MR. ELY: Pull up Defendant's Exhibit 152.

15 Q (BY MR. ELY) And tell us -- this is security 12:23:08 to  
16 12:31. So can you tell us what we are looking at here?

17 A Sure. We're at the Sandbar across the street, across  
18 7th Avenue.

19 MR. ELY: Can you split out with Defendant's Exhibit  
20 185 so we can have some reference of where this is.

21 A While you're doing that, we're looking at the south end  
22 of building 6 and the two adjoining structures. The one  
23 immediately to its left from this perspective burned, and the  
24 second to the left did not.

25 Q (BY MR. ELY) So can you point to us, Dr. Schroeder,  
620

1 where the video generally is set up?

2 A Sure. Can I --

3 Q Yeah.

4 A Where do you want me to point?

5 Q Yes.

6 A Oh, does that do it? Oh, wow. Let me pull -- sorry  
7 about the artwork.

8 So that's kind of the perspective we're looking at.  
9 We're looking towards the end of building 6.

10 Q Okay. And so can you orient us with the other areas of  
11 the Metropolitan to where they would be located with the  
12 security camera shot? What's that to the left?

13 A To the left? I'm not tracking with you. I'm sorry.

14 Q Point us to the doughnut building, if you would.

15 A The doughnut building is here.

16 Q And can you point us to phase 5?

17 A (Witness complied.)

18 Q And then phase 4?

19 A (Witness complied.)

20 Q And then the parking garage?

21 A (Witness complied.)

22 Q Okay. So what we were looking at with the vantage point  
23 of the security video is the doughnut building will be to the  
24 left?

25 A Yes.

1 Q And phase 5 will be behind phase 6?

2 A Correct.

3 Q And phase 4 and the parking deck will be up in the left  
4 corner?

5 A Yes.

6 Q Okay. So let's go back to the video, please. We've got  
7 to clear that.

8 A Do I do that? Do I clear it, or does somebody else do  
9 it?

10 Q I got it. Thank you.

11 A Thanks.

12 Q Okay. So in an effort to speed this along a little bit,  
13 we're not going to watch all these videos in realtime. I'm  
14 going to ask Chris to move it through. And when you want to  
15 stop, please let us know to stop, but, otherwise, we're going  
16 to kind of track through the video.

17 And describe for us, if you will, as we're going  
18 through, what we're looking at right now, the timestamp in  
19 relation to the beginning of the fire.

20 A Okay. So we're before the beginning of the fire.

21 And -- can I mark on this?

22 Q Yes, you can.

23 A Oh. Just something to see. Those are the lights in the  
24 garage. You can see it from this perspective, and we'll see  
25 them again. They'll be in a different state.

622

1           This is a doorway into building 6, and it's all  
2 quiet. You've got the container boxes back here, which we'll  
3 see when we're looking at the fire from the 30th Street side.

4           Let's roll tape.

5       Q     What are in the container boxes?

6       A     That's further construction.

7       Q     Okay.

8           MR. ELY: Can we grab the play and move it along a  
9 little faster?

10      A     Hold it right there. Just a second ago, we saw wisps of  
11 smoking coming up from this doorway.

12           And we should clear my markings off, please.

13           So watch -- you can just kind of see it right now,  
14 and it's 26:44. Watch there. See the coloration changes?  
15 You get a clear vision, and then it's obscured a little bit.  
16 That's smoke starting to find its way out of the building.

17           Keep rolling.

18           More smoke coming out. We're at 27 -- 0027. So  
19 this time clock is off by an hour. You see more smoke coming  
20 out.

21           Let's pick it up a little bit, please.

22           Okay. Stop right there. We've got smoke here. And  
23 this illumination, that's from the fire. The fire is burning  
24 in this -- the building is constructed like an E, with the  
25 middle part of the E kind of cut back short. So in between

623

1 two legs of the E, you're getting fire in that alcove area  
2 that is now burning with such intensity that it's illuminating  
3 the trees across the street.

4 Clear and roll. Thank you.

5 More smoke.

6 Now stop.

7 If you watch up here, you're going to see  
8 illumination. The fire is moving its way up towards the roof.

9 Clear.

10 This is the -- no. Stop.

11 Watch the smoke here. You'll see a consistency of  
12 the smoke moving out of the building and towards the  
13 northeast. We're not seeing -- if we draw a line here, we're  
14 not seeing any smoke moving in the direction of phase 3. It's  
15 moving to the east and to the north.

16 Clear and roll, please.

17 More fire coming, shooting up in the back. You can  
18 see it just boiling up here.

19 Clear. Roll.

20 And you can speed it up a little bit more.

21 Oh, here. Again, I want to point out to you where  
22 this smoke is going. It's actually going -- hooking around  
23 the corner now and heading to the northeast. Still clear --  
24 on the phase 3 side, still clear to see the lights in the  
25 parking garage. That is not obscured by the smoke. There's

624

1 no smoke over there.

2 Roll tape. You can pick up the speed a little bit.

3 PD is on the scene.

4 Q PD, you mean police department?

5 A Police department.

6 And even up here, you see the smoke being pulled  
7 across the front and south side and then moving to the  
8 northeast. This is all heading in that direction.

9 Clear my mark off.

10 There's a police officer down there running around  
11 going, What a mess.

12 And you can speed that up a little bit more.

13 Q All right. So let's go to the second section of video,  
14 security 12:31 to 12:40.

15 Dr. Schroeder, does this pick up where the other one  
16 left off?

17 A It does. It does. We don't have any gaps.

18 Look at the smoke rolling around, going to the  
19 north, going to the east, coming out of this southeastern  
20 corner of building 6.

21 Q Dr. Schroeder, we see -- now see smoke coming out of  
22 the -- on the left side of the building next to these  
23 residential structures. Can you explain what's happening  
24 there?

25 A Sure. We are getting some smoke from building 6, but it  
625

1 is being drawn into the body of the fire.

2 And then think of a campfire and -- a big campfire.  
3 The air for the reaction -- because to have fire, you need  
4 fuel, you need heat, and you need oxygen.

5 And so we've got plenty of fuel. This is like a --  
6 almost like a forest inside with all of the studs and framing.  
7 So we've got plenty of fuel.

8 We've got fire. Now what we need is oxygen. And so  
9 this fire is just drawing oxygen in from all around it. And  
10 the plume, the body of fire, literally the heat and the fire  
11 rising up from around and above building 6 is part of that  
12 draw; part of drawing the air into that area from all around.

13 So you see some smoke coming out of the western side  
14 of building 6. And, by the way, that side does not have any  
15 windows; so it is kind of a barrier wall. There are some  
16 openings, some vent openings in there; but for the most part,  
17 it's a barrier wall.

18 Now we're getting activity through the front end, if  
19 you will, the south end of building 6. We should see the  
20 firetrucks roll up pretty quick.

21 Q So at this point --

22 A So you are getting some smoke over here, but you can  
23 still see the lights in the parking garage. They're not  
24 obscured. The smoke isn't being drawn there.

25 Q So at this point in the fire, the airflow around the  
626

1 other areas of the Metropolitan, is the fire pulling air away  
2 from those areas?

3 A Yes.

4 Q Okay.

5 A You just saw the first engine come in. And by the way,  
6 you'll hear me talk about engines and trucks. Trucks are the  
7 ladder trucks, the elevated platforms. The engines -- here's  
8 a truck rolling here, and that's a quint 22. So they're on  
9 the scene.

10 Q Can you tell for the rest of us what a quint is and what  
11 it does?

12 A Sure. And here comes ladder 2.

13 A quint is a truck that has both a big fire pump in  
14 it as well as the ladder, an aerial platform. So it can do  
15 both jobs.

16 The ladder truck only does one job, and that's the  
17 aerial platform. And so if they want to put a hose up there  
18 to discharge water, they have to have an engine, another fire  
19 truck supporting that effort.

20 The quint, no. The quint can both pump its own  
21 water as well as extend the boom and discharge water down from  
22 the elevated platform.

23 So, again, your --

24 Q Let's move to video 3. I think this is security at  
25 12:48 to 12:56.



1       A     All right. So stop right here for just a second.

2               This is quint 22 setting up. That's the end of the  
3 ladder, the end of the platform setting up to start spraying  
4 water onto building 6.

5               The other ladder truck is back here, ladder 2, and  
6 they're setting up to spray water on building 6 as well.

7               This is in the early stages. They've just got on  
8 scene. They're trying to get into an attack mode. And you'll  
9 see that things change very rapidly, and all of a sudden the  
10 chief is saying, Move the trucks, move the trucks. And you --  
11 I'm not hearing that, but you can see the action on the video.

12              So if you'll clear that and roll tape.

13              You see the firefighter coming down. Now they've  
14 moved it. You just saw the ladder swing out of the way.  
15 That's because they're thinking, Oh, my God, this is going to  
16 be -- we'll be at risk. Let's reposition the equipment.

17       Q     At this point --

18       A     If you look here, you'll see the smoke being drawn. The  
19 fire's intensity, that wall has lost its integrity, and the  
20 illumination is coming out.

21              If you'll clear that screen for a second.

22              You can still see the outline of the doughnut  
23 building as well as the parking lot.

24              Clear screen.

25              Okay. The other ladder truck's here. They're

1 setting up. You can see the top of the platform. Quint 22 is  
2 now spraying water, trying to spray water. It's not a very  
3 impressive stream at this point.

4 You see the fire hoses? This firefighter now is  
5 using a hand line. There's a firefighter up in the basket of  
6 ladder 2, and now they're pulling that down. You see ladder 2  
7 going down, and you see a firefighter moving up in the basket.

8 The fire was so intense on this eastern side along  
9 30th Avenue that the firefighter that was in the basket  
10 actually was injured. He bailed out of the basket, and you  
11 see them trying to hose him down right now. It's so intense.  
12 He bailed out of the basket and injured himself. He didn't  
13 wait to walk down it.

14 Clear screen, please. Clear screen.

15 Watch on this side, you're going to see the building  
16 start to -- as you're seeing, there's quint 2 now getting a  
17 fog stream going.

18 They'll be moving the ladder truck out of the way.  
19 You can see people scrambling over here on the right,  
20 firefighters scrambling, and this is a completely-out-of-  
21 control-it's-going-down-to-the-ground-soon fire.

22 Q And at this point in the fire, is the airflow -- is the  
23 airflow still the same, away from the other areas of the  
24 Metropolitan?

25 A That's right. If you look over here, you can see the  
629

1 doughnut building, phase 3. No obscurations to speak of. You  
2 can see the top of the parking garage, and everything is being  
3 drawn in. You've got a clear line here. The smoke isn't  
4 rolling out there. It is literally being drawn into this  
5 massive plume that from a distance it looks like a volcano.  
6 It's just dramatic. It's huge. A big column of fire into the  
7 sky.

8 Clear screen, please.

9 You can speed it up.

10 You see the firefighters moving hose lines.

11 MR. ELY: Let's queue up the next one, which is  
12 security 100 to 105.

13 A We can -- oh, here, this -- you see steam and the early  
14 stages of smoke on this adjoining building. That's because of  
15 radiant -- the heat from the fire. The radiant heat from the  
16 fire is so intense that it's causing things at a distant to  
17 light up, to auto ignite; meaning, you don't need to put a  
18 flame there. The radiation, like the sun's radiation, is so  
19 intense, it will literally burst into flames, and we're  
20 getting the early signs of that with that house.

21 Before things burst into flames as they're being  
22 slowly heated, you'll see the change in the material. You'll  
23 see it start to off gas. You'll see it give off moisture.  
24 You'll see it literally smoke before boom, it bursts into  
25 flames when you've got a fire that is -- when that building is  
630

1 being subjected to radiant heat, not flame.

2 Q Okay.

3 A Okay. You can see the smoke just -- it's here. It's  
4 being drawn into the building. Collapse. The first sign of  
5 collapsing. Hope you all saw that. That was the south wall.

6 Q And when the wall collapsed, at that collapse stage, did  
7 the airflow change and the smoke change directions?

8 A No, no. In fact, you can see how even from the  
9 adjoining house, how it's all getting drawn in. That's being  
10 drawn in by this massive column of fire, which is the  
11 footprint of building 6.

12 Q Okay.

13 A Continues to be drawn in.

14 MR. ELY: Chris, you can probably speed it up a  
15 little bit.

16 A Yeah.

17 MR. ELY: Let's go to the next security video. I  
18 believe it's 2:04 to 2:12. Yeah.

19 A Okay. Now -- clear screen, please.

20 The building has collapsed and is now burning what  
21 we call in the business rubble. It's burning rubble.  
22 Building is pancaked. It's no longer the structure we knew it  
23 to be. And the ladder trucks are setting up to now start the  
24 final extinguishment, and that takes time.

25 But as you can see, the smoke is still being drawn  
631

1 up and things are moving towards the northeast. It is not  
2 going backwards. It's not going in this direction towards the  
3 doughnut building. It's not going in this direction towards  
4 phase 4 and the parking lot. It is going in this direction  
5 and up.

6 Q Okay.

7 MR. ELY: Chris, you can probably speed a little  
8 through this now.

9 A You can see a ladder truck spraying water.

10 Q (BY MR. ELY) And still no change in the airflow at this  
11 stage?

12 A No.

13 MR. ELY: Let's go to 2:38 to 2:46.

14 A There was -- they hit a hot spot. That's actually steam  
15 coming out.

16 Q (BY MR. ELY) Okay.

17 A You can see quint 22. You can still see the smoke being  
18 drawn towards the body of where building 6 was.

19 Q Dr. Schroeder, in the back, there's some lights in the  
20 parking garage. Can you tell us what you're seeing right at  
21 this point in the fire with regards to the lights back there?

22 A Sure. They're emergency lighting. So if you lose power  
23 to a building, in order to get out safely for the occupants,  
24 there's emergency lighting set up. We've got it in this  
25 building. You go anywhere and you'll see it.

632

1           The parking garage was equipped with emergency  
2 lighting. And I will tell you that we see three lights here.  
3 When we're looking at the video early on before the fire, you  
4 saw that the parking garage was well lit up inside. Now it's  
5 not.

6       Q     What does that tell you?

7       A     Tells me the power's out.

8       Q     Okay.

9           MR. ELY: Chris, we can probably speed through this  
10 as well.

11       Q     (BY MR. ELY) Now, at this stage of the fire, we see  
12 smoke down at the lower levels. Can you describe for us  
13 what's happening at this time in relation to the other parts  
14 of the Metropolitan?

15       A     Sure. At this point in the firefighting effort, we  
16 really are in the -- I'll call it the final extinguishing  
17 stages. So we no longer have that massive plume, that big  
18 rising column of fire occurring, and it's more akin to when  
19 you're trying to put out a campfire. So the smoke is going to  
20 be drifting and moving out in all directions versus what we  
21 have been seeing in the main course of the fire.

22           So we are starting to get drifting on a lateral  
23 lower-to-the-ground basis here.

24       Q     When you say "drifting," can you describe for us what --  
25 how that's any different than what was happening when the fire

633

1 was active?

2 A I think I did, but I'll do it again.

3 Q Okay.

4 A So when the fire is active, we've got this big column of  
5 fire going up in the sky. Heat is rising, and that's pulling  
6 in air from all around. So that's the driving force, a column  
7 of hot air pulling everything in from around it.

8 In this case, it's really tamped down, if you will.  
9 The fire's no longer generating that kind of massive column.  
10 And as the firefighters are putting water on the fire, they're  
11 getting steam. They're getting some smoke, and it's not just  
12 rising straight up. It is now able to move out laterally in  
13 all directions.

14 Q All right. Let's look at some photographs just from the  
15 end stage of the fire really quickly.

16 MR. ELY: Can we go to RAS109613. Can you split  
17 screen with Defendant's Exhibit 185?

18 Q (BY MR. ELY) So, Dr. Schroeder, can you tell us where  
19 this photograph was taken in relation to the Metropolitan and  
20 phase 6?

21 A This photograph is taken -- that's the view and the  
22 angle.

23 Q Okay. So for orientation purposes, to the right of  
24 where phase 6 was and to the left is -- that's the doughnut  
25 building in the upper left corner?

634

1 A It's up here.

2 Q Okay.

3 MR. ELY: Can we go to RAS009117 with the left  
4 screen, please.

5 Q (BY MR. ELY) Can you show us where this photograph --  
6 generally where this photograph would have been taken?

7 A Looks like a view of the angle from here looking in that  
8 direction.

9 Q Okay. And is the -- this taken in front of the doughnut  
10 building there?

11 A Yes. This is on 7th Avenue.

12 Q Okay.

13 A That's quint 22 right there.

14 Q And is -- can you describe for us what you gleaned from  
15 this photograph in terms of the activity of the plume and the  
16 smoke at this stage of the fire?

17 A It's fairly clear the plume is still going up, and there  
18 is clear space between the building and the fire plume. So  
19 there's no smoke moving out laterally attacking building --  
20 the doughnut building. It's all being drawn into the massive  
21 column created by the fire.

22 MR. ELY: Can we go to RAS009109, please, on the  
23 left side.

24 Q (BY MR. ELY) Okay. Dr. Schroeder, can you tell us where  
25 this photograph was taken in relation to the Metropolitan?

635



1       A       It's taken from across from right about here looking.  
2       Here's the southeastern corner of the Metropolitan.

3       Q       Okay.

4       A       You can see the nextdoor building and obviously the  
5       fire. And, again, you get a clear space between where the  
6       smoke is and the building.

7               MR. ELY: Can we go to RAS105980 on the left,  
8       please.

9       Q       (BY MR. ELY) Okay. Dr. Schroeder, can you point to us  
10      on the map where this would have been taken?

11      A       I believe it's in this area right here.

12      Q       Okay. And same thing with the smoke which you've  
13      already said?

14      A       Yeah.

15      Q       Okay. One last photograph, RAS009120 on the left,  
16      please.

17      A       Oh, that's looking towards building 6. Here you see  
18      building 5. You see the tower, the elevator tower for  
19      building 6, and you see the adjoining building, and back here  
20      is phase 3, the doughnut building.

21      Q       Okay. So now we've seen the video, the photographs of  
22      the fire. So let's talk a little bit, if we can, about the --  
23      what you were able to determine about the airflow.

24               MR. ELY: Can we go to RAS334783, please, on the  
25      left.

1 Q (BY MR. ELY) Dr. Schroeder, tell us what we're looking  
2 at, and also give us a vantage point from where this diagram  
3 is looking.

4 A Sure. Let me create an arrow pointing in that  
5 direction. I'm just not getting this done very well today.

6 So we're looking from the east to the space between  
7 building 5 on the right and building 6 on the left, and the  
8 big tell for this is the bridge between 5 and 6. You can see  
9 that here too.

10 And back into the drawing, back into the diagram is  
11 the doughnut building, phase 3.

12 Q So is this phase 5 on the right?

13 A It is.

14 Q Phase 6 on the left?

15 A Yes.

16 Q Can you describe for us -- with respect to phase 5, can  
17 you describe for us the airflow patterns with regard to phase  
18 5?

19 A Well, the airflow is going to be coming around phase 5.

20 Q Okay.

21 A The windows were intact, at least during the early  
22 stages of the fire, and the -- so that's not really a  
23 contributor because there's no -- there's no supply air.  
24 You've got a closed volume. So it's really the air moving  
25 around phase 5 and being drawn in.

637

1 Q Okay. What happens when the windows are out? Does  
2 air -- is air pulled out of phase 5 in the fire?

3 A If you don't have anything on the other side to supply  
4 air that's being pulled out, it will probably be pretty  
5 stagnant in there.

6 Q Okay. Let's go to RAS106001 on the left, please.

7 A There we are watching the firefighters. And, again,  
8 you've got a clear view down the alleyway towards phase 3  
9 building. And there's the parking garage.

10 Q So at this stage, is air being driven into phase 5 or  
11 the opposite direction?

12 A No. Air is being drawn into 6. It is not being driven  
13 into phase 5 or any of the other Metropolitan buildings.

14 MR. ELY: So let's go to RAS105689. I want to move  
15 to the parking deck.

16 Q (BY MR. ELY) So tell us what this is, please, this photo  
17 is.

18 A So on the right side here is phase 4, and that's -- that  
19 is the southern wall of phase 4 that runs parallel to the  
20 parking ramp.

21 Q Can you show us on the map where that is?

22 A Sure. Right here, right in that area.

23 Q Okay.

24 MR. ELY: So can you go to RAS376694.

25 A So this is the fire. Air is being -- as I said, this  
638

1 massive column of fire wants air, and so it will be pulling it  
2 from anywhere.

3 The 10-foot space between the parking garage and  
4 phase 4 provides a nice avenue of air to get moved in because  
5 the -- you've got openings in the parking garages. It's  
6 not -- the walls are not continuous.

7 So you can see in the parking garage, and that  
8 allowed for the fire, the body of the fire to be pulling air  
9 from between building 4 and the parking garage through the  
10 parking garage and feeding the fire.

11 And that's what this diagram shows, the airflow that  
12 I would expect that plume would be drawing through.

13 Q Okay.

14 MR. ELY: Can we go to RAS105534.

15 Q (BY MR. ELY) Can you tell us, first of all, do you know  
16 when this photograph was taken and by whom?

17 A Yeah. It was taken on the 2nd of October by a fire  
18 investigator for Veritas.

19 Q Okay. And can you show us on the map where this  
20 location is?

21 A Sure. Where that red dot is.

22 Q Okay. And is there anything -- tell us what you're  
23 seeing with regard to the parking deck or any impacts of the  
24 fire that you can see. Is there anything you can take from  
25 this photograph?

1 A I'm seeing soot accumulation on the face of the parking  
2 wall. There's certainly not soot accumulation on the window.  
3 This is the window in the elevator lobby when you're looking  
4 out. Nothing's going on there.

5 You can see building 6 back here and its remains.  
6 Nothing remarkable is happening here.

7 Q Is this photograph consistent with your opinion that the  
8 airflow on the night of the fire was flowing actually away  
9 from the other areas of the Metropolitan into the fire?

10 A Yes.

11 MR. ELY: Can we go to RAS105472, please.

12 Q (BY MR. ELY) So tell us the vantage point of this.  
13 There's the bridge again?

14 A Sure. We kind of saw this during the fire photographs  
15 where the firefighters had the lines out and were spraying the  
16 hose streams out. So we are looking again through the alley  
17 towards phase 3. The phase 3 exterior wall is back here.  
18 Right behind that green box is the entryway into phase 3.  
19 It's a double steel door entryway. And there's a canopy on  
20 top of it.

21 And directly above that are windows in the elevator  
22 lobby. The photograph we previously saw I believe came out of  
23 the third floor elevator lobby looking through that window.

24 Q And that -- the green thing where you have that dot on  
25 the right side, what is that?

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1 A Oh, that's an electrical transformer.

2 Q Was -- based on the information you saw, was that  
3 damaged in any way by the fire?

4 A No. No, it was not.

5 Q And with respect to the visual of the eastern face of  
6 phase 3 -- and, again, the doughnut building, this would have  
7 been the wall of the doughnut building closest to the fire,  
8 correct?

9 A Yes.

10 Q Can you draw on the map where that wall was?

11 A (Witness complied.)

12 Q Okay. And based on this photograph and your review of  
13 the documents, were you able to find any visual evidence of  
14 smoke impact on that exterior wall?

15 A No. There's a couple other things I've seen in the  
16 photograph, if I may.

17 Q Sure.

18 A Building 5, these are windows into building 5 on its  
19 east side. They're intact. They're not broken out. They're  
20 not busted by hose streams. They're intact. They're not  
21 broken by fire.

22 And then the dumpster, that's not impacted by fire  
23 either. That's not -- you don't see the discoloration of the  
24 paint. You don't see it oxidized. It was fine. It was  
25 happy.

1 Q Okay. Let's go to -- so based upon this photograph and  
2 what we can see from the doughnut building and the other  
3 areas, is this consistent with your understanding -- your  
4 opinion that the airflow during the time of the fire was away  
5 from the buildings into the fire?

6 A Yes.

7 MR. ELY: Let's go to RAS109560.

8 Q (BY MR. ELY) Tell us what we're looking at here. Is  
9 this a photograph you took?

10 A We're on the fourth floor of phase 5 looking at the  
11 bridge going to phase 6. We've seen a lot of shots from the  
12 outside looking in. The bridge is going across. Now we're in  
13 5 looking into 6, looking towards 6.

14 Q Can you show us on the map where this photograph was  
15 taken?

16 A Right there.

17 Q Okay. And tell us what your observations are of this  
18 photograph.

19 A Sure. If we look at the wood and the steels. We have  
20 oriented strand board here, 2 x 4 studs and 2 x 6 studs. We  
21 have steel truss plates here and trusses, and none of it's  
22 charred. None of it's sooted. None of it's showing any signs  
23 of heating.

24 And if hot air, hot gasses would find their way into  
25 that area, you would see that. You would see the wood start

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1 to discolor. You would see, depending on the duration of  
2 heating, char start to form.

3 And with the steel, this light steel also starts to  
4 lose its strength if it's being subjected to heating.

5 We don't see any of that.

6 Q Again, is this photograph consistent with what you  
7 found, that air was being pulled away from the other  
8 structures into the fire?

9 A Yes. It was not -- fire was not being -- finding its  
10 way into the space.

11 Q Okay.

12 MR. ELY: So let's look at RAS376696. Full screen,  
13 please.

14 Q (BY MR. ELY) So tell us what we're looking at here,  
15 Dr. Schroeder.

16 A This is kind of a viewing angle if we were in a drone  
17 looking down from 7th Avenue on the complex. So you've got  
18 the two buildings in between. You have the doughnut building  
19 here, 6, 5, and the garage.

20 Q Can you show us the directional airflow from each of  
21 those other areas of the Metropolitan during the fire?

22 A Sure. Drawn in, drawn in, drawn this way, drawn that  
23 way. Obviously this way and this way, all being drawn into  
24 this column.

25 Q So based upon your review of the video, your review of  
643



1 the documents and the many photographs and your experience  
2 over 50 years of investigating fires, were you able to arrive  
3 at an opinion to a reasonable degree of scientific certainty  
4 as to whether the smoke from the phase 6 fire impacted the  
5 other areas of the Metropolitan?

6 A I have.

7 Q What is that opinion?

8 A It did not.

9 Q Okay. Now, I want to shift gears with you quickly to  
10 the -- there have been claims here for water damage to the  
11 doughnut building and other areas of the Metropolitan. So I  
12 want to shift gears to that for a minute, and I want to go to  
13 RAS376725, please.

14 So can you tell us, Dr. Schroeder, what we're  
15 looking at here?

16 A Sure. This is a setup of where the engines and the  
17 ladder trucks were positioned as they were fighting the fire.  
18 There's quint 22, which I've talked about quite a bit. Truck  
19 2 or ladder 2 back here.

20 And I noted here, I'm circling, video. The position  
21 the video was shot from was actually a little further north,  
22 but this is a witness to the fire, a civilian, if you will,  
23 that has come upon it and is now doing a YouTube video.

24 Q Before I leave this, I want to -- I do want to ask you  
25 this question.

1           With respect to this diagram, did you review the  
2 Birmingham fire records, the videos, and the photographs to  
3 determine where the Birmingham Fire Department directed its  
4 water streams?

5       A     I sure did.

6       Q     Did you find any indication anywhere that the Birmingham  
7 Fire Department directed water streams to any part of the  
8 doughnut building or phase 4?

9       A     No, they did not.

10      Q     Other than the photograph we saw of phase 5 in between  
11 phase 6 with the bridge, were there any information or  
12 photographs or records that you saw that indicated that fire  
13 streams had been directed to any other part of the  
14 Metropolitan other than that south phase of phase 5?

15      A     No, no.

16      Q     So let's go to RAS009127. I believe it's the video that  
17 the jury has seen before. It's the YouTube video of the fire.

18           The purposes of this I want to talk about  
19 specifically as we go through this, I'd like to -- I'd like  
20 for you to describe for us what you're seeing in terms of the  
21 embers.

22           Can you, first of all, tell us what -- you call it  
23 something different.

24      A     Brands.

25      Q     Tell us what that is.  
                                645

1       A       So as the wood is burning, it's breaking down, and  
2       chunks of it will start to fall apart. Some of those chunks  
3       may still have unburned wood and have a fuel value left in  
4       them. And those burning brands will be lofted up by the plume  
5       and ultimately drop out.

6               So brand burning is a big deal in wild land fire  
7       right now. It's a massive deal in California, huge, because  
8       the fires are occurring. They're picking up houses. The  
9       houses have this additional fuel package and start to break  
10      up, and brands are now spreading the fire away from and  
11      forward from the frontline.

12              So it's jumping because of brand burning. You'll  
13      get brand burning in -- primarily where you've got a structure  
14      that's fully evolved and now you've got -- there's no roof.  
15      It's just burning like a big campfire, which we had here.

16      Q       So as part of your work on this project, you made an  
17      analysis of where the fire brands impacted the Metropolitan?

18      A       Yes.

19              MR. ELY: So let's roll this video. We can do it  
20      the same way, Chris.

21      A       So can we stop for just a second, please?

22              Just -- I'd like you to know more details.

23              This is building 5, and the ladder truck is back in  
24      here, ladder 2. We have an intersection. We have a  
25      firefighter there. And, in fact, you can see the hose that  
646

1 the firefighter is dragging over to hit the hydrant there.  
2 You look closely, you'll see the hydrant, you see the fire  
3 helmet down. He's bending down to make that connection.

4 The building is not yet collapsed. So this is the  
5 plume. This is the massive column of fire. And even as the  
6 plume is going up, it's still drawing in air.

7 Okay. Sorry about that.

8 Q (BY MR. ELY) That's all right.

9 A Clear. Okay, stop.

10 These are brands. These are burning brands you see  
11 coming to -- towards the photographer. And the photographer  
12 is north and east of the building; north and east of building  
13 6.

14 You don't see any of that -- of those glowing embers  
15 over in this region.

16 Q Okay. So what we were looking at -- so, Dr. Schroeder,  
17 can you draw where the video is being taken from? Just put a  
18 dot.

19 A Back here.

20 Q Okay. And where are we -- with the video still, we have  
21 the right corner. Can you tell us where those brands are in  
22 relation to the Metropolitan?

23 A They're over in here.

24 Q Okay. And the area you pointed to over the doughnut  
25 building, that's the area that's clear?

1 A Yes.

2 Q Okay.

3 MR. ELY: Can you pull 185 out, please?

4 A I don't want that to suggest there were no brands  
5 hitting on the doughnut building because this area closest to  
6 the fire sure got brands. It did get brands from the fire.  
7 So I don't want to leave you with the impression that there  
8 was no brand dispersal on building 5. There was.

9 Q (BY MR. ELY) Right. Okay. So let's keep rolling with  
10 it.

11 A See the point down. All that falling down are burning  
12 brands. The glowing little -- not so small. The glowing  
13 things coming down are brands. You see the air being drawn  
14 here, brands falling out of the column. Just hit over there.

15 Can we back up for just a second, please?

16 Watch the brand that comes down and hits the ground  
17 and kind of bursts. Here it comes. Boom. That was a  
18 good-sized brand. So you -- but this is all moving to the  
19 northeast.

20 Ladder 2 is moving. You see the truck backing up  
21 there?

22 Q And just for reference, when you say it's moving to the  
23 north and east, north and east is the directions away from the  
24 other areas --

25 A Oh, yes. Yeah, yeah, yeah. Yes, it is. And here's

648

1 where -- there's a brand that flew and hit right next to the  
2 videographer.

3 MR. ELY: Okay. We can stop that.

4 Let's go to RAS376670, please.

5 Q (BY MR. ELY) So, Doctor, tell us what we're looking at  
6 here.

7 A The remains of building 6 is there. Obviously this is  
8 the doughnut building here. Building 5 is here.

9 The coloration, the darker gray, the lighter gray  
10 represents where there was the darker, more brand markings  
11 found in the roof material. Lighter is fewer.

12 What I will tell you is as I'm preparing for court,  
13 I did see some lesser dispersal of brands in this white area  
14 of 5.

15 So building 5 definitely got nailed by fire brands.

16 MR. ELY: Okay. Let's take a look at RAS357. If we  
17 could split the screen out with this, 376670.

18 Q (BY MR. ELY) So, Dr. Schroeder, tell us, do you  
19 recognize this photograph?

20 A I do.

21 Q Do you know who took this photograph?

22 A It was at J.S. Held, I believe, on the 18th of October.

23 Q So this was taken October 18, 2018?

24 A Yes. Just days after the fire.

25 Q Okay. So tell me what I'm looking at here.

1       A       Sure. This is the roof of building 5, and somebody has  
2 obviously gone up there and said, Oh, we've got holes. We  
3 need to patch.

4               So they're using this black zip system tape. When  
5 they're constructing the building and putting up walls, they  
6 put this black barrier tape that won't allow moisture to go  
7 through between the exterior oriented strand board walls.

8               So they're -- somebody is on the site, gone up and  
9 said, Okay, these holes will let water in; let us quick patch  
10 it in the interim until we get a new roof up here.

11              They were also up there doing larger patches because  
12 I can see this -- that wool or partially looking wool  
13 material, that's roofing material. That's thermal polyolefin,  
14 TPO. And so somebody was up there with the pieces of TPO  
15 covering larger holes that had been created by the fire.

16       Q       Can you show us on the diagram on the right where this  
17 location is, please?

18       A       I think it's right in this area here.

19       Q       Okay.

20              MR. ELY: On the left, can we go to RAS357257?

21       Okay.

22       A       Yeah. There you see -- you're seeing more brand holes  
23 that did not get covered.

24       Q       (BY MR. ELY) Do -- so with respect to -- and I've seen  
25 some of -- we can see some of the brands here. Again, can you

650

1 show me a location, if you're able to, as to where this  
2 photograph's taken?

3 A I think this is over in this area.

4 Q Okay. So with respect to these brands we're seeing on  
5 the left, they're not covered with that zip tape?

6 A Right.

7 Q Can you explain why some of these might have been  
8 covered, some of these wouldn't be covered?

9 A Sure. So if I may talk a little bit about the roofing  
10 material, the TPO, the thermal polyolefin. That's plastic,  
11 and it's a plastic that can be --

12 MR. ABRAMS: Your Honor, can I approach?

13 (Counsel approached the bench and the following  
14 proceedings were had:)

15 MR. ABRAMS: Your Honor, this is not in his report.

16 MR. ELY: It's fine. That's fine. I'll move on.

17 (The proceedings returned to open court.)

18 MR. ELY: So let's go to RAS357275.

19 Q (BY MR. ELY) Tell me what I'm looking at here, please.

20 A So we're on building 5 up in this area.

21 Q What direction am I looking?

22 A We're looking to the west. The parking garage is here.  
23 Building 4 is here.

24 Q Again, these -- was this photo taken in October 2018?

25 A Yes.



1 Q Okay.

2 A As I was saying to you all earlier, in preparing, I did  
3 see some other spots on building 5 where brands had hit, but  
4 the dispersal was far less than what we saw in the shaded  
5 areas.

6 Q Okay. And is this -- what's depicted in this  
7 photograph, is this also depicted in the diagram on the right  
8 in that white area?

9 A Yes.

10 Q And the white area is -- based on your opinion, there  
11 was no impact from the fire brands in those areas?

12 A Correct. In fact, you don't even see any tape. No  
13 black tape.

14 MR. ELY: Can we go to RAS357284 on the left.

15 Q (BY MR. ELY) Okay. And is this in the same location  
16 looking at the phase 4 roof?

17 A Correct. You're looking in that direction, parking  
18 garage on the left, phase 4 roof in the center.

19 Q That's consistent with your determination in this  
20 diagram that there are no brands in that area?

21 A Correct.

22 Q Okay.

23 MR. ELY: Go to 357296.

24 A Just -- again, to be precise, there's no brands showing  
25 on phase 4 in the foreground of that photograph. As I pointed  
652

1 out before, there's a few spots.

2 Q Right.

3 MR. ELY: So let's go on to 357307.

4 Q (BY MR. ELY) Tell me what I'm seeing here, please.

5 A Sure. We're in this region of building 5, and there's  
6 patches and there's no patches. And then I talked to you  
7 earlier about something was up there. I pointed out -- in  
8 fact, here's the roll of TPO right back there that someone had  
9 gone up and made a big patch. And that's the big patch right  
10 there. That was after the fire.

11 Q Okay.

12 MR. ELY: Let's show 357309, please.

13 A Now, in fact, when the photograph was taken, here's the  
14 adhesive and the applicator used. You can see the adhesive  
15 here and here.

16 By the way, this is the bridge to building 6.

17 Q (BY MR. ELY) Can you show us on the map where this is  
18 located?

19 A Sure. Right about there.

20 Q Okay. So with respect to phase 5, these photographs are  
21 indicative of the damage that occurred from the embers to that  
22 section of the TPO membrane; is that correct?

23 A Yes.

24 Q That's reflected in your diagram of the dark shaded  
25 area, the grayer shaded area in RAS376670?

1 A Yes.

2 Q Okay. Now, let's take a look at RAS116295 on the left  
3 screen, please.

4 Dr. Schroeder, do you recognize this photograph?

5 A Sure. It's the doughnut building.

6 Q Do you know when this was taken?

7 A I think this photograph was taken in December.

8 Q Of what year?

9 A Of -- December of 2018.

10 Q Do you know the source of this photograph?

11 A ATC. They did a survey of the property.

12 Q Okay. Can you show us on the right diagram what area of  
13 the doughnut building roof this picture depicts?

14 A That area.

15 Q And based on -- is it your opinion that there's no ember  
16 or brand damage in that section of the roof as of December of  
17 2018?

18 A That's correct. I see nothing, no signs of it.

19 MR. ELY: Let's go to RAS116297 on the left, please.

20 Q (BY MR. ELY) Again, do you recognize this photo?

21 A I do.

22 Q Do you know when this photograph was taken?

23 A Same group, December 18th of 2018.

24 Q Can you show us on the diagram to the -- on the right  
25 where -- what this is depicting?

1 A They're moving across the doughnut building on the north  
2 end.

3 Q Okay. What section is in the -- on that left side? Is  
4 there a section of the doughnut building we can see from there  
5 as well to some degree?

6 A I just marked on the diagram.

7 Q Okay. So, again, this photograph you reviewed, is this  
8 consistent with your opinion that there was no ember or fire  
9 brand damage from the phase 6 fire on the doughnut building  
10 roof?

11 A It is.

12 MR. ELY: Can we go to RAS116303.

13 Q (BY MR. ELY) Can you show me where this is located on  
14 the Metropolitan, this photograph?

15 A Back in this area.

16 Q Again, is this a photograph from December of 2018 from  
17 ATC?

18 A Yes.

19 MR. ABRAMS: Counsel, what date did you say?

20 MR. ELY: December of 2018.

21 A Yes. I'm sorry. I'm trying to get precise location for  
22 you.

23 Q (BY MR. ELY) Okay. That's fine. So this is the back  
24 corner of the phase 4 roof in December of 2018?

25 A Yes.

1 Q Again, was this consistent with your conclusion that the  
2 ember -- there was no ember or brand damage from the phase 6  
3 fire on the phase 4 roof?

4 A It is. It is consistent with that.

5 Q So based upon your review of the photographs, the  
6 information you were provided and your experience -- and the  
7 video and your experience as a fire investigator, were you  
8 able to come to an opinion within a reasonable degree of  
9 certainty, scientific certainty, as to whether embers or  
10 brands from the phase 6 fire impacted the doughnut building  
11 roof or the phase 4 roof?

12 A I do have an opinion.

13 Q What is that opinion?

14 A Brands did not impact -- fire brands did not impact  
15 those roof areas of phases 3 and 4.

16 MR. ELY: Your Honor, we've been going a little  
17 while. I'm at a breaking point if you would like. I can keep  
18 going.

19 THE COURT: Let's go for another 15 minutes.

20 MR. ELY: Yes, sir.

21 Q (BY MR. ELY) So I want to shift gears a little bit with  
22 you, and I want to --

23 MR. ELY: If we could pull up RAS335050 on the left  
24 side and Defendant's 185 on the right, please.

25 Q (BY MR. ELY) Okay. Dr. Schroeder, can you tell us,  
656

1 first of all, where did this photograph come from?

2 A I took it.

3 Q Can you show us on the -- what does it depict on the  
4 left?

5 A Well, this is the eastern wall, eastern exterior wall of  
6 the doughnut building. The wall closest to the fire.

7 Q Can you draw for us on that diagram where this wall is?

8 A Sure.

9 Q Where this wall is, are we -- we're looking back towards  
10 the parking garage, correct?

11 A We are.

12 Q Okay. So tell me what we see in terms of air vents and  
13 airflow or air vents on this particular wall.

14 A Sure. I will do my best.

15 And there's more down here.

16 These are -- what I've circled are intake vents for  
17 the corridor HVAC system. The corridor has its own heating  
18 and air conditioning systems, and these vents bring in makeup  
19 air. So it's dedicated just to feed air, fresh air to the  
20 corridors.

21 Q Okay. And so as part of your analysis, you reviewed the  
22 systems within the doughnut building and the complex as a  
23 whole; systems meaning the HVAC systems, correct?

24 A Yes.

25 Q And so is -- and you mentioned that these intake vents  
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1 service the corridor HVAC system?

2 A That's correct.

3 Q Is there another -- are there other HVAC systems within  
4 the Metropolitan, the doughnut building?

5 A Oh, absolutely.

6 Q So setting aside the corridor system, what other HVAC  
7 systems are there in the Metropolitan?

8 A The lobby space, the common area, the workout space,  
9 they have their own HVAC systems, their own heating and  
10 cooling systems. Each apartment has its own individual  
11 heating and cooling system as well. So we've got however many  
12 apartments with their own individual heating and cooling  
13 systems, and then the common space and then the corridors.

14 Q So with respect to the individual systems -- and each  
15 unit has its own self-contained HVAC system, correct?

16 A Yes, it does.

17 Q Is there any airflow from the outside into those  
18 individual apartment HVAC systems?

19 A There are no intake ducts like this to serve the  
20 individual HVAC system. There's --

21 Q It doesn't --

22 A There's no outside makeup air that is being dedicated to  
23 each unit.

24 Q So let's go to -- Dr. Schroeder, down on the bottom of  
25 the wall, can you identify those for me, what those things

1 are?

2 A You mean down here?

3 Q Yes, sir.

4 A I'm kind of doing a box around them.

5 There are three pass-through ducts. A pass-through  
6 duct is -- there's no blower. There's no -- it's just like a  
7 tunnel.

8 And pass-through ducts are to get fresh air into the  
9 courtyard of the center of the doughnut, and that's their only  
10 purpose. Another avenue is so you don't get stagnant air  
11 within that courtyard doughnut area.

12 Q Okay. So I want to take the individual systems first.

13 MR. ELY: Can we pull up RAS007443? Okay. So we  
14 can take the right side down, please, Chris.

15 Q (BY MR. ELY) So let's talk about the individual  
16 apartment HVAC systems. Is this -- as I understand your  
17 testimony, the -- there's no external inflow from the outside  
18 in?

19 A That's correct.

20 Q It's simply a recirculation of the interior air?

21 A Yes. And it expects that there will be some leakage  
22 around the windows and movement in and out of the apartment to  
23 refreshen it, but there's no dedicated fresh air.

24 Q So if we're talking about smoke infiltration then, where  
25 is -- where are pathways into the individual units of -- smoke  
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1 from an external fire?

2 A It would either have to come through an open window or  
3 through the door opening to the corridor.

4 Q Okay. Can you tell us what, based on the blueprints and  
5 plans, you were able to determine about the doors to the  
6 corridors from the individual units? That would just be the  
7 front door of the apartment?

8 A Yes.

9 Q Okay.

10 A So the corridors have got to be safe. They've got to be  
11 fire safe. If you've got a fire in one unit, you don't want  
12 that spreading into the corridor and around. Or if you've got  
13 a fire elsewhere, you don't want the people in the adjoining  
14 spaces to be at risk.

15 So the fire code, the building code requires what's  
16 called a fire-rated door to be used from the corridor into the  
17 individual apartment. And that fire-rated door has been  
18 tested, and it's there to create a barrier from fire moving in  
19 and smoke moving in.

20 Q Okay.

21 MR. ELY: Can we go to RAS024942, please.

22 Q (BY MR. ELY) Is that an example of a door you're talking  
23 about?

24 A It is. I'll just point out a couple of things.

25 There's the threshold. There is a sweep on the  
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1 lower, and if we look close, there are -- appears to be a seal  
2 around the inside of the frame, so you get the sides of the  
3 door and the bottom sealed up. And that's a barrier from  
4 smoke moving into that space.

5 Q Is that part of the design of the apartment to prevent  
6 that infiltration?

7 A Oh, yes.

8 Q Okay.

9 A That's part of the fire door assembly.

10 Q Okay. So -- and with respect to the interior  
11 apartments, the apartments themselves, this was a fire that  
12 was external; meaning, away from the other parts of the  
13 Metropolitan, outside the four walls, correct?

14 A Right. It was not in front of the building, that's  
15 correct.

16 Q Is there a difference in terms of the movement of smoke  
17 into rooms from a fire inside the building versus an external  
18 fire outside the building?

19 A Oh, absolutely.

20 Q Can you tell us how an internal fire acts in terms of  
21 pushing smoke around inside a building when the fire is in the  
22 building?

23 A Sure. If the fire is on the outside, campfire, all the  
24 pressure, all the heat that's being generated is lost to  
25 atmosphere. So there's no containment of it. And so there's

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1 no pressure being built up by the fire because it's just being  
2 released in the atmosphere.

3 We take the same fire and we put it inside of a  
4 building. We put it inside this courtroom. We've got walls  
5 and ceilings and doors creating what -- technically we call  
6 that a control volume. Well, for today, it's a room.

7 If we have a fire in this room, the smoke and hot  
8 gasses will rise up and start to change the temperature of the  
9 room. But because the volume, the space itself doesn't  
10 change, with the change in temperature, creates a change in  
11 pressure. So we're actually pressurizing this room if we had  
12 a fire in it, and that pressurization wants to find avenues of  
13 release. So it will go through doors. It will go through  
14 ductwork. Like water, it will find its way out, and that's  
15 the dramatic difference.

16 We don't have the pressurization occurring within a  
17 building when the fire is external. No heating of the  
18 interior, no pressure change.

19 Q Okay. And so is it your opinion that -- strike that.

20 With respect to these individual apartment  
21 complexes, if there was infiltration from the common spaces  
22 into the apartment or from the external windows into the  
23 apartment, would that leave a trail?

24 A Yes. Smoke does leave a trail from where it's the  
25 densest, and it diminishes as it's moving into a space, out of

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1 a space.

2 Q Where would you see those trails in -- if it comes from  
3 the -- let's start with the interior space. From a hallway  
4 into an apartment, where are you going to find those trails?

5 A With the greatest density -- the greatest smoke  
6 concentration should be right around the openings where the  
7 smoke is being pressurized and pushed into that space.

8 Q Okay. And if it's coming from the outside, where would  
9 you find that?

10 A When you say "outside," are you talking external?

11 Q External to the building.

12 A You're not going to find that.

13 Q Okay. So with respect to a smoke infiltration event,  
14 why is there a smoke infiltration event into the apartments?  
15 What would you expect to see throughout the building?

16 A I would expect to see a lot of signs of soot and smoke  
17 accumulation, darkening, especially where it's being -- coming  
18 into the space around the doorframe if the doorframe is not  
19 sealed. If it's coming in through windows, smoke will  
20 condense out, literally cause a film on the window on the  
21 inside. And if it's in the HVAC system -- and, again, these  
22 are individual units.

23 So if you've got smoke coming into one individual  
24 unit, I would expect it to show up on the diffusers or even in  
25 the corridor. I would expect smoke staining, discoloration,

1       blackening to be shown in the diffusers.

2       Q       Okay. And based on your review of, I guess, tens of  
3       thousands of photographs in this case, did you see any  
4       evidence of those signs of a widespread smoke infiltration  
5       event in the interior spaces?

6       A       No, I did not.

7       Q       And is that something -- based on your experience over  
8       2,500 to 3,000 fires, is that something you would expect to be  
9       fairly obvious when tenants move back in after the fire?

10      A       Oh, yes.

11      Q       Okay.

12               THE COURT: This will probably be a good time for a  
13      break.

14               MR. ELY: Absolutely. Thank you, Your Honor.

15               THE COURT: We'll take a break at this point in  
16      time. Again, I'll ask you not to discuss the case among  
17      yourselves or with others in any form or fashion as outlined  
18      in my instruction. We'll take about 15 minutes and break at  
19      this time.

20                       (A recess was taken.)

21               (The following proceedings were had in the presence  
22      of the jury:)

23      DIRECT EXAMINATION (continued) BY MR. ELY:

24      Q       Dr. Schroeder, when we left off, we had talked about  
25      individual HVAC systems. I want to move off of that, and I

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1 want to, if I could, take a look at still 514.

2 Okay. Can you tell us what that is?

3 A Sure. That's the courtyard side of the pass-through,  
4 that passive duct with no blower that brings fresh air into  
5 the -- inside of the doughnut area.

6 MR. ELY: Can you split screen with Defendant's  
7 Exhibit 185, please.

8 Q (BY MR. ELY) Can you show us an arrow where -- or lines  
9 to explain where that -- the pass-through delivers air back  
10 and forth?

11 A There are three of them. One goes through 26, one goes  
12 through 25, one goes through 24.

13 Q Okay. Now, I believe earlier in your testimony we were  
14 talking about the stage of the fire where it was essentially  
15 being put out and the smoke was low to the ground. I think  
16 you mentioned drift.

17 A Yes.

18 Q Okay. Is it possible that at that low stage that you  
19 get some drift into these pass-throughs?

20 A Sure.

21 Q And is it also possible that at this drift stage, if  
22 there's openings, you may have some smoke from the phase 6  
23 fire drifting in?

24 A Yes.

25 Q As an example, at the end of the fire during the drift  
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1 phase, I'll call it, phase 5 had been opened up because of the  
2 windows?

3 A Correct.

4 Q And would you expect to see some -- potentially some  
5 drift of the smoke into phase 5?

6 A Yes.

7 Q And by virtue of that, if combustion byproducts were  
8 found, some in phase 5, that wouldn't -- that was consistent  
9 with your opinion; that wouldn't surprise you?

10 A No. I would expect that.

11 Q Now, with respect to these pass-throughs, can you  
12 describe how they're put together like --

13 A Sure. I'm the grandson of a sheet metal worker. So  
14 they would have a mechanical -- either an interlocking between  
15 the duct system. So this is sheet metal ducts that are put  
16 together. You're not going to have one that's 30 feet long.  
17 So you have to put it together in sections, but that is going  
18 to be a mechanical-fastened section. It just doesn't -- they  
19 just don't butt them up. And so the sections can flop around.

20 Q Okay. And so is it -- I mean, is it theoretically  
21 possible that if smoke in the drift phase got into those  
22 ducts, that they could infiltrate some area of the doughnut  
23 building?

24 A I really doubt that under no pressure, I wouldn't expect  
25 to see smoke finding its way through that mechanical joint.

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1 Q Okay. And so -- you mentioned pressure. Is that an  
2 element that you're looking for in terms of determining where  
3 the smoke is going?

4 A Yes.

5 Q Kind of the driving force?

6 A Yes.

7 Q So at this drift phase with either the pass-throughs or  
8 into phase 5, there's no driving force?

9 A No.

10 Q And so is it your opinion that any infiltration into  
11 either phase 5 or through the pass-throughs would have been  
12 minimal?

13 A Yes.

14 Q Okay. So the last thing I want to talk about with  
15 regard to air systems in the doughnut building.

16 MR. ELY: If we could go to RS010843 on full screen,  
17 please.

18 A Before you leave the photograph --

19 Q (BY MR. ELY) Yes.

20 A -- may I point something out?

21 Q Sure.

22 A So if we had smoke passing through, volumes of smoke  
23 coming out the pass-through, I would expect to see patterns of  
24 smoke, condensed smoke both on the ceiling above it as well as  
25 the louvers itself. These are clean.

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1           Now, this was captured off of Mr. Irmiter's video  
2 that he took when he was out at the site looking at things.

3       Q     Okay. When was that?

4       A     No other photographs really captured -- and none of the  
5 4,000, 5,000 photographs taken in October of 2018 looked at  
6 any of that. Didn't -- it didn't document a condition where  
7 we had smoke issuing out of there.

8           MR. ELY: Let's go to RS010843, please.

9       Q     (BY MR. ELY) So as part of your analysis, you also took  
10 a look at the internal construction specifications, correct?

11      A     Yes.

12      Q     And one of the issues that's been raised that you looked  
13 at was the existence of fire separation walls in the doughnut  
14 building, correct?

15      A     Yes.

16      Q     And did you form an opinion as to whether the fire  
17 separation walls had been installed into the doughnut  
18 building?

19      A     I have.

20      Q     Okay. And can you tell me what we're looking at on the  
21 screen presently?

22      A     So this is the document that came through the  
23 discovery -- it was produced by I believe in this case, it  
24 could have been the architect -- where they're getting  
25 pressure from the building inspector saying he's both -- the

1 building inspector is enforcing a one-hour assembly at both  
2 the interior floor ceiling assembly as well as the ceiling  
3 assembly to the unusable space.

4 I would use the term interstitial space, but  
5 unusable space is what's above the ceiling, between the  
6 ceiling and the next floor. And this was constructed with  
7 trusses, so it's an open cavity.

8 So they want -- the building inspector is going in  
9 and giving a critical eye as early as '17. And by the way,  
10 there are other documents dating into -- I think it's as late  
11 as June of '18 where the building inspector is still on them  
12 to do a complete job with fire caulking. So the city of  
13 Birmingham is watching this, looking for flaws.

14 Q And in the first paragraph of the problem identification  
15 or question -- let me back up.

16 What is this document? It's got Bomasada's name at  
17 the top. It's got originator, Douglas Altenbern. What are we  
18 looking at here?

19 A Distribution to the architect. That's an internal  
20 document.

21 Q What is Bomasada asking of the architect?

22 A Well, it's saying that it's got an RFI number of 90.  
23 But the most important thing is the second sentence that says,  
24 However, this is holding up inspections and a significant  
25 amount of work to proceed.

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1 Q When you say RFI, what's that stand for?

2 A I don't know what that means.

3 Q Okay. So is this part of what you reviewed to determine  
4 whether the fire separation walls had been installed in the  
5 doughnut building?

6 A It is, yes.

7 Q And as of the request of September 13th, 2017, at least  
8 what this document says, is that the fire separation wall  
9 issue is holding up inspections and a significant amount of  
10 work to proceed?

11 A Yeah. It's like a stop work. The city has said, Hey,  
12 you're not going to proceed.

13 Q Okay. And in determining whether the fire separation  
14 walls had been installed, did you also look at photographs?

15 A I did. A lot of photographs.

16 MR. ELY: Can we go to RS010844.

17 Q (BY MR. ELY) Can you tell me what we're looking at here?

18 A Sure. My recollection is that came out of a group of  
19 photographs and communication from the building people to the  
20 architect or the architect to the building people saying, This  
21 is what we need. The city is requiring this level of  
22 completion.

23 So you see that the orange tube going through,  
24 around its space. You see a foam-like material where it's  
25 passing through, that's fire caulking. They want it taped so

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1 there's no gap where the gypsum wallboard comes up to the  
2 underside of the next floor.

3 This is kind of a "This is what we expect"  
4 photograph.

5 MR. ELY: Can we pull up RAS334782?

6 A By the way, this is not after the fire.

7 Q (BY MR. ELY) Okay. This was during construction before  
8 the fire?

9 A Yes.

10 Q Tell us what we're looking at here.

11 A So I created or micro created a graphic to better  
12 explain to you what these different construction features  
13 should look like when completed, and this is based upon the  
14 plans that were submitted to the city of Birmingham.

15 Q Explain to us the significance of the existence of fire  
16 separation walls in terms of your analysis of the impact of  
17 this fire.

18 A Well, the fire separation walls compartmentalize spaces,  
19 don't allow for commonality between spaces.

20 I was talking about the fire door earlier, the door  
21 between your unit and the corridor. Well, this takes on the  
22 same approach, only more stringent. This has rated  
23 assemblies, which have been tested by UL and other  
24 organizations and published. And the architect looks, Okay,  
25 we need in this case L546, and that is prescribed on how

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1 you're going to do that.

2           So if we're in the corridor here and we look up, we  
3 see the ceiling, and that's part -- that's a fire barrier.  
4 Gypsum wallboard is a fire barrier to keep fire from getting  
5 into the truss space above. In this case they also filled the  
6 truss spaces with fiberglass insulation, probably so they  
7 wouldn't have to sprinkler them, put fire sprinklers in those  
8 spaces.

9           Between the corridor interstitial space and the  
10 living unit space, the gypsum wallboard has to go all the way  
11 up to the underside of the next floor. So you have an  
12 effective barrier from floor to floor, and that's both in the  
13 corridor as well as about the perimeter walls of the unit.  
14 Not every wall has to go all the way up within the unit; but  
15 around the perimeter, it does.

16           So that's all I'm trying to show here.

17       Q     Okay. So with respect to the fire separation walls,  
18 does the presence or absence of the fire separation walls in  
19 this building have any impact on whether combustion byproducts  
20 can migrate into the living spaces of the apartments?

21       A     Sure.

22       Q     Okay. Tell me about that.

23       A     I think we were talking earlier about how can you get  
24 smoke into spaces. If you've got a fire in one -- we'll talk  
25 about internal fire for a second.

1           If you've got a fire in one unit, that fire is not  
2 going to spread to the adjoining units rapidly because this  
3 Sheetrock, gypsum wallboard-rated barrier goes all the way up  
4 to the underside of the ceiling. So even if we lose some of  
5 the Sheetrock, the gypsum ceiling, because of the fire, it's  
6 still not getting a chance to laterally spread up in this  
7 space.

8           The same thing holds true with smoke. It is as much  
9 of a fire containment as it is a smoke containment. And,  
10 again, this is all compartmentalization. We've learned over a  
11 hundred years the importance of compartmentalization in  
12 keeping property and people safe.

13       Q     Does the presence or absence of the fire separation  
14 walls, based on your investigation in this particular fire,  
15 impact your opinion as to whether soot and char from the phase  
16 6 fire infiltrated the individual apartment spaces?

17       A     The presence of it tells me by design we're not getting  
18 common migration between, let's say, the corridor and the  
19 inhabited space, both above in the interstitial space as well  
20 as in what's called the inhabited area where we live.

21       Q     And in your review of the materials, it is your opinion  
22 that the fire separation walls, there was evidence that the  
23 fire separation walls were in place?

24       A     Yes. I even saw them in building 5 up in the  
25 interstitial space while building 5 was still in kind of a raw

1 state.

2 Q I want to shift gears to the last HVAC air system. I  
3 want to talk about the common area HVAC. And I want to go  
4 back, if I could to -- real quickly, RAS335050.

5 My question here is, I think you had circled all  
6 these vents on the side of the east wall of the doughnut  
7 building. These -- you identified these as exterior -- tell  
8 me what --

9 A Makeup air, fresh air.

10 Q And those service the corridor HVAC systems which are  
11 different than the individual apartment systems?

12 A That is correct.

13 Q So based on your experience in the number of fires you  
14 investigated over the years, if there was a significant or  
15 major infiltration of soot and char into an HVAC system,  
16 what's the -- what evidence of that would you be seeing?

17 A I would be looking at the filters, and I would be  
18 looking at the diffusers, the vents.

19 MR. ELY: Can we pull up RAS381865.

20 Q (BY MR. ELY) So tell me what this photograph is and when  
21 it was taken?

22 A So this photograph was taken in -- I think it was April  
23 24th of 2019. So about six months after the fire.

24 And we're seeing some kind of deposit on the  
25 diffusers, and these are the outlets. This is not where air  
674

1 is coming in. This is the discharge from the H -- corridor  
2 HVAC system along the east side of building 3, the doughnut  
3 building, and I'm only on the first floor. So we've got two  
4 of them.

5 If you look down in the lower section, it says  
6 hallway 127, 127. That's the room that it's right behind.  
7 The other one, which we'll see, is probably hallway 123.

8 Q RAS381869.

9 MR. ELY: Can you split the screen, please.

10 A That's the other one, 123.

11 Q (BY MR. ELY) Are these on the same hallway?

12 A Yes.

13 Q Okay. And besides these two photographs, the four I  
14 think you called them diffuser vents, have you seen any -- in  
15 your review of all the documents and all the photographs in  
16 this case, have you seen any other photographs of diffuser  
17 vents with discharge of some sort of particulate?

18 A No, I have not.

19 Q Did you make a calculation -- did you count the number  
20 of diffuser vents in the doughnut building?

21 A I counted the number of diffuser vents in phases 1  
22 through 4.

23 Q Okay. How many did you come up with?

24 A 1,077 vents and grilles.

25 Q So besides these four vents that were taken April 2019,  
675



1 six months after the fire, did you see any other photographs  
2 of any of the 1,077 vents that had particulate?

3 A No.

4 Q Based on your experience, over 50 years of investigating  
5 fires, if there was an infiltration, smoke infiltration issue  
6 into an HVAC system, would you be seeing more than four out of  
7 1,077?

8 A Yes.

9 Q Okay. Dr. Schroeder, I want to go to -- finally, want  
10 to go to what you reviewed to determine the actual state of  
11 the interior spaces both the night of the fire and shortly  
12 thereafter.

13 MR. ELY: Let's go to RAS501626.003168, please.

14 Q (BY MR. ELY) So while he's pulling that up, were you  
15 able to review video from the Birmingham Police Department  
16 body cam video?

17 A I did, yes.

18 Q From the night of the fire?

19 A Night of the fire.

20 Q So based on your review of that video, can you describe  
21 for us what -- what was Birmingham Police Department doing?

22 A Going in and notifying the occupants of the phase 3  
23 building that there was a fire next door and they needed to  
24 leave the building.

25 Q So did you do the same thing with that video that you  
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1 did with the other videos and break it down frame by frame?

2 A Yes.

3 Q Okay. So tell me generally what your observations were  
4 of the video footage that you saw.

5 A So the officers make entry on the 7th Street side. They  
6 go up to the fourth floor first. And as they're moving around  
7 the doughnut building, the fourth floor, they're knocking on  
8 doors and getting people alerted that there's a problem next  
9 door.

10 There are no alarms going off. You're not seeing  
11 the strobes going off at this point. My impression is people  
12 are answering the door going, Why are you bothering me? Why  
13 are you knocking on my door?

14 Q Is the -- is your review of that Birmingham Police  
15 Department video, what value is it to you in terms of your  
16 analysis?

17 A The corridors are clear. There's no smoke making entry  
18 into the building. Everybody's walking around. Nobody is  
19 coughing. Nobody's covering their mouths. They're -- it's  
20 just another day on the fourth floor.

21 Q And so based on your experience, again, if there was  
22 a -- there was smoke infiltration from the phase 6 fire into  
23 the doughnut building, what would you expect to be seeing?

24 A Well, the clear entry points into the doughnut building  
25 are these 6-inch or 8-inch -- I think actually 6-inch fresh  
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1 air intakes going to individual HVAC units in the corridor. I  
2 would expect to see the corridor being the first charge, the  
3 first place that you would detect smoke if it was being drawn  
4 into the building. And at this point, it's not the case.

5 Q And what do you mean by charged?

6 A Oh, when smoke starts filling a space, it charges the  
7 space. The smoke layer builds down, and your obscuration  
8 rate, the distance that you can see, reduces, and it just  
9 keeps getting worse and worse.

10 Q And you weren't able to see any of that in the video?

11 A No, no.

12 Q How long was the video, Dr. Schroeder?

13 A 15, 20 minutes. They were more than on four. They were  
14 on three and two. They were going through the building.

15 Q Before I get -- before I pull the video up, I do want to  
16 go back to something with respect to the HVAC systems in the  
17 doughnut building but particularly, the corridor HVAC systems.

18 Did you -- did the blueprints call for smoke alarms  
19 to be in that system?

20 A I believe it did, yes.

21 Q Okay. And have you since determined that those smoke  
22 alarms were never in the system?

23 A They were not installed.

24 Q Okay. So there was no mechanism in there to shut down  
25 the HVAC system due to smoke?

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1 time that most of us civilians would say is, Oh, it's 45  
2 minutes after midnight or 0045, as I like to use.

3 Q So it's 12:45?

4 A 12:45.

5 Q (By Mr. Ely)

6 MR. ELY: All right. Let's go to the next one,  
7 RAS510626.003591.

8 Q (BY MR. ELY) Okay. This is what we were talking about  
9 earlier. This is the hallway?

10 A Yeah. This is one of the corridors on the fourth floor.

11 Q Okay. So at 12:46, what's going on outside with the  
12 fire?

13 A It's burning quite intensely, but it's not close to  
14 collapse yet.

15 Q Okay. And, again, based on what you said earlier, this  
16 is -- in terms of looking for a smoke-filled building, this is  
17 not what you would expect?

18 A Correct.

19 MR. ELY: Can we go to RAS501626.006999.

20 Q (BY MR. ELY) Another hall photo shot?

21 A Right. This actually is on the west side of the fourth  
22 floor. The reason why I can tell is that this -- the riser,  
23 the sprinkler supply pipe here for a hand line for firefighter  
24 is only on the west side.

25 MR. ELY: Okay. Can we go to RAS501626.007922.  
680

1 Q (BY MR. ELY) You had mentioned the tenants.

2 A Yeah.

3 Q And I think you had -- is this -- this is an indication,  
4 shows the hallway, kind of what's going on in the building  
5 evacuation, correct?

6 A Yeah. There's more than one, than just this man.

7 MR. ELY: All right. So let's go to  
8 RAS501626.008233.

9 Q (BY MR. ELY) Another tenant?

10 A Another tenant.

11 Q Another hallway?

12 A Yep.

13 MR. ELY: RAS501626.008128.

14 Q (BY MR. ELY) Another hallway?

15 A Yep. Fourth floor.

16 Q RAS501626.008906.

17 A Police officer walking down a corridor in four.

18 Q (BY MR. ELY) And the last photo, RAS501626.026997.

19 A Same thing.

20 Q Okay. So what time is indicated on this body cam?

21 A 0059. So it's 12:59, just before 1:00.

22 Q So this all took place between 12:45 and one o'clock in  
23 the morning, correct?

24 A On the fourth floor.

25 Q On the --

1       A       They're still in the building after one o'clock. They  
2 move down to the third and then to the second.

3       Q       In terms of the fourth floor evacuating the tenants,  
4 this took place 12:45 to one o'clock?

5       A       Yes.

6       Q       What's going on with the fire during that period of  
7 time?

8       A       We're moving toward collapse, and I think collapse  
9 starts, as we saw earlier this morning, about 1:02, 0102.

10      Q       Okay. Let's go to -- I want to move to additional  
11 photos that talk about the condition of the building shortly  
12 after the fire.

13               MR. ELY: Can we go to RAS105436.

14      Q       (BY MR. ELY) Okay. This -- you recognize this  
15 photograph?

16      A       I do.

17      Q       Do you know who took this photograph?

18      A       It was taken by the Veritas fire investigator on the 2nd  
19 of October.

20      Q       So this is within five days of the fire; five, six days?

21      A       Yes.

22               MR. ELY: Can we go to RAS105513 and place  
23 Defendant's 185 to the right, split it.

24      Q       (BY MR. ELY) Do you know the source of this photograph  
25 on the left?

1 A I think it's Veritas as well.

2 Q Okay. Same date, October --

3 A Yes.

4 Q Within five days of the fire?

5 A Yeah.

6 Q Can you show us on the map where this hallway is?

7 A Sure. In that direction. And by the way, this corner,  
8 the elevator is right here, and this is a service room.

9 Q Okay. So --

10 A This is the east wall.

11 Q Okay. And that is an interior wall. Can you tell what  
12 floor that's on?

13 A I'm sorry?

14 Q Can you tell what floor that's on?

15 A Two through four. Right now I can't tell you.

16 Q That's fair enough.

17 So this, on the left where you've written east wall,  
18 this is the interior wall closest to the fire?

19 A Yes.

20 Q Okay.

21 MR. ELY: Can we take a look at RAS105550 on the  
22 left, please.

23 Q (BY MR. ELY) Can you tell us where that is?

24 A Continuing down that corridor.

25 Q That same east side closest to the fire?

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1       A       East side closest to the fire. Now we're down at this  
2 end.

3               MR. ELY: Can we go to RAS105551.

4       Q       (BY MR. ELY) Can you locate this for me, please?

5       A       I can. This is the first floor east wall. Here's  
6 double doors that go out into the alleyway. Here's the  
7 elevator. Photograph is looking south.

8       Q       Okay. Can you show us on the map where this is?

9       A       I tried to clear that. It's right here.

10      Q       I believe we saw a photograph earlier, the double doors  
11 with the canopy?

12      A       Yes.

13      Q       Is that the inside of the double doors with the canopy?

14      A       It is. The canopy is right outside here.

15      Q       Okay. And based on your review of these photographs,  
16 were you able to see any signs of smoke infiltration into  
17 these areas of the doughnut building as a result of the phase  
18 6 fire?

19      A       No. I would be looking for it around here and up here.

20               MR. ELY: I'll pass the witness, Your Honor.

21               MR. ABRAMS: May I, Your Honor?

22               THE COURT: Yes.

23 CROSS-EXAMINATION BY MR. ABRAMS:

24      Q       Dr. Schroeder, my name is Mike Abrams. I'm a lawyer in  
25 Kansas City. Nice to meet you.

1 A Nice to meet you.

2 Q Let's start where Mr. Ely ended. Let's look at --

3 MR. ABRAMS: Pull up slide 18, Melissa.

4 Q (BY MR. ABRAMS) When you said, Dr. Schroeder, while  
5 we're pulling that up, that when you saw police body cam  
6 videos, there were no alarms going off, correct?

7 A On -- they were on the fourth floor. Eventually  
8 somebody did pull the alarm in the building.

9 Q Okay.

10 A The cops were -- they didn't know whether they'd gotten  
11 everybody out, and then they pulled the alarm.

12 Q But there's fire alarms going off during the police body  
13 cam video, correct?

14 A Towards the end of it, yes.

15 Q I thought you said you didn't see any alarms going off.

16 A Not on the fourth floor.

17 Q Okay. But you did see on the body cam image -- and  
18 we'll get it up there just so we have it absolutely clear.

19 A Yeah.

20 Q Again, this body cam footage happens before phase 6  
21 falls to the ground, correct?

22 A What we've just been looking at, yes.

23 Q What's that?

24 A On the fourth floor, that is correct.

25 Q Well, for the entire body cam footage that you saw,  
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1 correct?

2 A No. I think we have them still in the building when the  
3 collapse is occurring.

4 Q At the very end maybe?

5 A Towards the end, yes.

6 Q Okay.

7 MR. ABRAMS: Can you play that? Is it having  
8 problems loading? Maybe go to the next.

9 Q (BY MR. ABRAMS) I don't think we're in any disagreement.  
10 I heard you say in your testimony no alarms going off, but you  
11 recognize that during the police body cam footage, alarms are  
12 going off, correct?

13 A Eventually they do go off.

14 Q Let's switch gears.

15 I want to show you -- let's just start with the  
16 security footage of the fire, and parts of it for some reason  
17 Mr. Ely didn't show you.

18 MR. ABRAMS: Can we pull that up?

19 Q (BY MR. ABRAMS) So let's orient ourselves here,  
20 Dr. Schroeder. The time here is -- it says 2:04 on the top,  
21 correct?

22 A Correct.

23 Q And that's about 30 minutes after the last part of the  
24 video that you were shown during direct examination, correct?

25 A I'm sorry. I --

1 Q I think it was about 1:20, maybe a little longer. Let's  
2 see if this one will play.

3 MR. ABRAMS: All right. Wait. Can you pause there  
4 for one second and roll it back?

5 Q (BY MR. ABRAMS) So what's happening at the fire here is  
6 we've got -- 6 has collapsed, correct?

7 A Yes.

8 Q Structure next to it caught on fire, correct? And you  
9 showed us pictures of that, right?

10 A I did.

11 Q That's what's happening here. Still working on the  
12 fire. You can see the flames, right, still going, right?

13 A It's in a pretty extinguished state; but, yeah, there's  
14 still burning going on.

15 Q There's still burning going on. All right.

16 MR. ABRAMS: Play this. Thank you, Melissa.

17 Q (BY MR. ABRAMS) And we see here that the smoke is  
18 drifting towards the left of the screen towards phases 1  
19 through 3, correct?

20 A We're seeing some of that, yes.

21 Q Okay.

22 A From the right of the screen, it is moving towards the  
23 body of 6, yes.

24 Q Towards the left of the screen which is --

25 A Yes.

1 Q Which is towards 1 through 3, correct?

2 A Right.

3 Q And you said something during your testimony. I just  
4 want to make sure that we've got it right.

5 Your report -- and you do not state with scientific  
6 certainty that smoke or char or soot could not have gotten  
7 into 1 through 4 from this fire, correct? You said it's  
8 possible, but you don't think it did.

9 But you're not saying from a degree of scientific  
10 certainty that the soot, char, and smoke from the fire got  
11 into 1 through 4, correct?

12 A No. I'll say that now from point of scientific  
13 certainty, no, it's not getting in there.

14 Q So -- all right. Let's talk about your role here.

15 You were hired on July 14th, 2020, correct?

16 A Seems right, yes.

17 Q 22 months after the fire, correct?

18 A Yes.

19 Q You didn't personally get to inspect the Metropolitan  
20 until October of 2020, correct?

21 A September and October.

22 Q Well, your report says October. Do you want to read it?  
23 It's on page 7.

24 A Then October it is.

25 Q Okay. And that was over two years, 25 months after the  
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1 fire, correct?

2 A Correct.

3 Q And as part of your analysis, you reviewed the  
4 Birmingham Fire and Rescue Service incident report as part of  
5 your analysis, correct?

6 A I did.

7 Q All right.

8 MR. ABRAMS: If we could put up -- Melissa, if you  
9 could put up slide 3.

10 Q (BY MR. ABRAMS) This is the report from the Birmingham  
11 Fire Department that you reviewed as part of your work,  
12 correct?

13 A Yes.

14 MR. ABRAMS: If you go to the next slide.

15 Q (BY MR. ABRAMS) And this says -- I know it's a little  
16 bit blurry to read. But in part it says that the fire --  
17 appeared that two apartments were involved in the fire with  
18 extension to the breezeway, correct?

19 A I'm sorry. Where's the extension to the breezeway?  
20 Yes, I see that.

21 Q Okay. And also it says that several apparatus were  
22 damaged as a result of the radiant heat from the fire,  
23 correct?

24 A Yes.

25 MR. ABRAMS: If you'd go to the next slide.

1 Q (BY MR. ABRAMS) This is from page 16 of the incident  
2 report. It says that heavy, black, turbulent smoke conditions  
3 were noted throughout the entire structure, correct?

4 A Yes. Now, now -- excuse me. Can you --

5 Q That was just a yes or no. We've got to get through a  
6 trial. Your counsel can ask you questions if there's things  
7 to follow up. But that was the right answer.

8 It also states that there was heavy black smoke or  
9 soot on the alpha and bravo sides of the structure, correct?

10 A Correct.

11 Q And so you have -- and you had smoke on the Charlie side  
12 of the structure, correct?

13 A Yes.

14 Q So three of the four sides, correct?

15 A Yes.

16 Q And you understand that the scene of the fire was kept  
17 under control of local and federal law enforcement agencies  
18 for at least a month, correct?

19 A No, not at all. In fact, we have people back in the  
20 building as early as the 2nd of October.

21 Q Okay. Let's pull up -- you want to read your report,  
22 page --

23 A Can I finish, please?

24 The footprint of the fire -- the footprint of  
25 building 6 may very well have been held for some time, but the  
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1 phases 1 through 4 and 5, no. People were in them.

2 Q On October 23.

3 Your report says, The scene of the fire was kept  
4 under control of local and federal law enforcement agencies  
5 for at least a month. Is that not true?

6 A No, that's not true.

7 Q Okay. Your point is that 6 was kept under control.  
8 Residents eventually got back in in October 23 of 2018,  
9 correct?

10 A Right. But people were in the building, maintenance  
11 people, fire investigators, and others were in the building  
12 early October.

13 Q And the residents don't get in until October 23,  
14 correct?

15 A That I think is correct, yes.

16 Q One thing that I neglected to mention when we were  
17 talking about the body cam footage. What we see from the  
18 police department body cam footage is that lights are on, AC  
19 is working, correct?

20 A At that time, absolutely.

21 Q And you don't know -- you believe at some time it may  
22 have stopped working, but you don't know when?

23 A I can't give you a timestamp on that.

24 Q All right. Let's look at slide 6 from your report.

25 Okay. You created this diagram or your folks  
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1 created this diagram, correct?

2 A Yes.

3 Q And if you look at -- when we talked about alpha, bravo,  
4 and Charlie with some smoke coming out of it, that's A, B, and  
5 C on this chart, correct?

6 A Correct.

7 Q All right. You would also agree that the heat of the  
8 fire was so intense that it caused issues for fire personnel  
9 that were attempting to establish a blitz nozzle on the  
10 Charlie side of the building, correct?

11 A Yes.

12 Q And buildings 1 through 4, just to orient ourselves and  
13 give us some kind of idea of how far apart these things are,  
14 they're about 119 feet from building 6, correct?

15 A I'd have to look at a diagram to give you the distance.

16 Q I can give you your report. I'm referring to page 25.

17 A Thank you. Yes.

18 Q Does that sound right, 119 feet?

19 A I think -- I'd like to direct you to figure 15.

20 Q I'm getting my copy out.

21 A It's hard for me to see.

22 Q Okay.

23 A Over a hundred feet I think is a fair representation.

24 Q Okay. Very good.

25 You agree that there was thermal damage that  
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1 impacted the exterior of phase 5, correct?

2 A Absolutely.

3 Q And that PVC foam core vent stacks on phase 5 roof were  
4 thermally degraded by the fire, correct?

5 A The one -- the face of those closest to the fire, yes.

6 Q Okay.

7 A Totally.

8 Q And let's look at slide 7. That's the Charlie side  
9 facing phase 5, correct? I'm sorry. That's the Charlie side  
10 of phase 5 facing phase 6?

11 A Based upon my diagram, yes.

12 Q Okay. That's correct?

13 A That is the Charlie side.

14 Q And you agree that that's fire damage, right?

15 A That's thermal damage.

16 Q Okay.

17 A That's not direct flame impingement. The body of fire  
18 is not on there, but the radiant heat is.

19 Q Let me put up another one. That's damage from a fire,  
20 correct?

21 A Yes.

22 Q Let me put it another way. Let's go to slide 8, please.  
23 This is -- and I think counsel may have shown you this. This  
24 is a still of the Birmingham Fire Department training their  
25 hoses, and that's -- that's shooting a hose towards phase 5,

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1 correct?

2 A No.

3 Q I'm talking about the one in the middle, not the one up  
4 on the crane.

5 A Look at the angle of the nozzle relative to the  
6 driveway. It's certainly spraying in the alleyway, but it's  
7 not spraying at 5.

8 Q Okay. It's more pointing towards 5 than 6, correct?  
9 Can we agree on that?

10 A Sure.

11 Q Okay. Let's look at slide 29, if you will.

12 MR. ABRAMS: Actually you can skip that. Let's go  
13 to slide 10.

14 Q (BY MR. ABRAMS) This is what we saw before.

15 Now, let's look at slide 11, please. This is a  
16 picture you looked at.

17 This is a photograph you took, correct?

18 A No. The Birmingham Fire Department took this.

19 Q Okay. I thought you testified that you took this?

20 A No, I did not.

21 Q Okay.

22 MR. ABRAMS: Can we go to Irmiter slide 13?

23 Q (BY MR. ABRAMS) While we're doing this, Dr. Schroeder,  
24 you would agree that the windows within phase 5 were found  
25 open during -- immediately after the fire, a number of them,

1 correct?

2 A You mean not in the fire exposed area?

3 Q In phase 5 --

4 A Not on the south wall?

5 Q Why don't we do this. Let's look at this. This is from  
6 phase 5, correct?

7 A Yes.

8 Q That's damage as a result of the fire, correct?

9 A Totally.

10 MR. ABRAMS: Go to the next slide, please.

11 Q (BY MR. ABRAMS) This is phase 5. That's damage as a  
12 result of the fire, correct?

13 A Radiant heat, yes.

14 Q Okay. But damage as a result of the fire, right?

15 A Yes.

16 Q Okay. And the windows are impacted, correct, on 5?

17 A Yes. The vinyl melted. Everything came out.

18 Q All right. Next slide.

19 All right. That's inside of phase 5, correct?

20 A Yes.

21 Q And it shows damage as a result of the fire?

22 A It does.

23 Q Okay. Next one.

24 A Yeah. You're looking towards -- you're looking towards  
25 building 6 there.

1 Q Okay.

2 A As is this one too.

3 Q Phase 5?

4 A Uh-huh.

5 Q It will go a lot quicker if I just ask you some  
6 questions.

7 A Okay.

8 Q We've got to get this jury out of here at some point.

9 This is slide 16. This is phase 5, correct?

10 A Yes.

11 Q It shows damage to the windows as a result of the fire,  
12 correct?

13 A You can see the vinyl melting, yes.

14 Q And you agree that hot gasses, smoke, or other  
15 combustion products, I believe you testified about this, could  
16 have entered phase 5 through these open bypasses, correct?

17 A That the smoke could certainly get in there later on,  
18 yes.

19 Q Let's talk a little bit about --

20 MR. ABRAMS: You can leave that up there.

21 Q (BY MR. ABRAMS) Dr. Schroeder, you're not a  
22 meteorologist, correct?

23 A I'm not.

24 Q Okay. You've never been one, correct?

25 A Correct.

1 Q Okay. On page 14 of your report, you state that the  
2 mixing height on the date of the fire was forecast to be 4,800  
3 feet above ground level, correct?

4 A Yes.

5 Q You didn't compute the actual mixing -- the mixing  
6 height level the day of the fire, correct?

7 A No. This information is coming from the National  
8 Weather Service, the fire weather data bank, and looking at  
9 the forecast for the Birmingham area on those days.

10 Q And you're not aware that the weather data from the  
11 National Weather Service at the time of the fire states that  
12 the cloud cover was only 800 feet above ground level, correct?

13 A Looking at the photographs, I would agree with that.

14 Q All right. Let's talk about brands or -- I'll call them  
15 brands because that's the term that you prefer.

16 You concluded that the TPO roofing on phase 5 was  
17 thermally pockmarked by burning brands and embers, correct?

18 A Yes.

19 Q And the embers and brands from the phase 6 fire  
20 physically landed and damaged the phase 5 roof?

21 A No question.

22 Q Okay. And we've heard testimony earlier that there were  
23 actually hundreds of pockmarks on phase 5. Hundreds, if not  
24 thousands. But you were not there to inspect the roof until  
25 two-plus years later, correct?

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1 A I'm sorry. Hundreds, if not thousands?

2 Q Correct.

3 A Somebody testified to that?

4 Q Yeah. And you weren't there, Dr. Schroeder. You were  
5 not there on that roof until it was repaired, correct?

6 A Correct.

7 Q All right. And when you went out -- did you actually go  
8 up on the roof?

9 A Of course I did.

10 Q Okay. And you couldn't even -- by the time you saw it,  
11 you couldn't tell where it had been patched, correct?

12 A On building 5, that is correct.

13 Q And on buildings 1 through 4, the magnitude of this  
14 roof, it's about a 4-acre roof, correct?

15 A That seems a little strong in the acreage, but it's a  
16 big roof.

17 Q Well, did you measure it?

18 A I didn't run that calculation.

19 Q Okay. So you don't know? You don't know how big -- how  
20 many square foot is the roof on 1 through 4?

21 A Just sitting up here without my diagrams, I can't tell  
22 you. I don't have that committed to memory.

23 Q All right. Let's -- well, you're not an expert in  
24 construction defects, correct?

25 A Correct.

1 Q You're not a certified building code inspector, correct?

2 A Correct.

3 Q You don't have any professional experience in  
4 construction or the roofing industry, correct?

5 A I have certainly overseen a number of flat roof projects  
6 for my own properties.

7 Q Right. Your only first-hand experience in construction  
8 methods and applications is simply being an overseer on  
9 personal or family-related construction projects? That's what  
10 you put in your report, correct?

11 A True. But I've also had training and education in the  
12 same areas as well, both in undergraduate as well as graduate  
13 programs.

14 Q You haven't overseen or managed a day-to-day  
15 construction project on a residential building, correct?

16 A I have.

17 Q For your family, your personal --

18 A Yes.

19 Q Other than that, you haven't done that?

20 A No, not my job.

21 Q Let's look at --

22 MR. ABRAMS: Can you put up Irmiter slide 36.

23 Q (BY MR. ABRAMS) Now, this is -- there's been testimony  
24 earlier about that this shows some radiant heat damage to the  
25 zip wall here?



1 A To the zip tape, yes.

2 Q Right. And you take issue with that, correct? Or no?

3 A No. That's what we're seeing here.

4 Q Okay. That that's fire damage to the -- that's fire  
5 damage to the zip wall?

6 A Heat-related damage to the zip wall, yes.

7 Q Great. Okay.

8 MR. ABRAMS: Can you put up slide 15.

9 Q (BY MR. ABRAMS) All right. Dr. Schroeder, you know what  
10 we're looking at here? This is a picture of the south  
11 exposure of the Metropolitan where the roofs on phases 2 and 4  
12 meet at the parking garage?

13 A Seems right, yes.

14 Q You agree that this shows smoke staining, correct?

15 A No.

16 Q What do you think this is?

17 A Organics.

18 Q Okay. On a two-year-old building?

19 A Sure.

20 Q Okay. Did you test it?

21 A No.

22 Q No, okay.

23 MR. ABRAMS: Let's look at slide 16.

24 Q (BY MR. ABRAMS) All right. You would agree that this  
25 picture shows smoke staining on the upper roof above phase 2?

1 A No, not at all.

2 Q Okay. You think this is organics also, right?

3 A Organics related to the roof, yes.

4 Q And you didn't test?

5 A No.

6 Q Okay. All right.

7 MR. ABRAMS: If we could go to slide 11.

8 Strike that. Let's move on.

9 Q (BY MR. ABRAMS) Now, we talked a lot about the way that  
10 the Metropolitan was built, what the plans show, and the way  
11 it was actually built, right? You testified about that on  
12 direct, correct?

13 A When it came to smoke detectors, yes.

14 Q But I'm going to ask you about several things. You --  
15 well, let's go one through one.

16 Your report states that the Metropolitan  
17 specifications indicated that smoke detectors were to be  
18 installed in the HVAC system, correct?

19 A Correct.

20 Q And you concluded that that would have halted the spread  
21 of smoke by HVAC blowers, correct?

22 A If they had picked -- if it had picked it up, yes.

23 Q Since you've written your report, you've discovered that  
24 that's not accurate, correct?

25 A That is correct.

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1 Q Okay. Because you were basing your report on the plans,  
2 not actually how it was built, correct?

3 A I would agree with that.

4 Q Okay. And also you were not aware that those systems  
5 were --

6 MR. ABRAMS: Well, let's go to slide 17.

7 Q (BY MR. ABRAMS) Actually here on this, you indicate --  
8 this shows smoke damage, right?

9 A That's from my file, yeah. It says, See smoke puff.

10 Q You had put into your report that --

11 A Actually hold on. My report, figure 13 is not this  
12 report.

13 Q Right. I was -- I wasn't saying this is from your  
14 report.

15 A Oh, I'm sorry. Then that's not my description.

16 Q No. I said it's not your description. I didn't say it  
17 was your description.

18 A I'm sorry. No, that is not my description.

19 Q Right. But you would agree?

20 A Excuse me? I would agree? I would agree that  
21 somebody's described it as see puff smoke grille, not  
22 Schroeder.

23 Q Right. Because -- do you know if this area was tested  
24 for soot and char?

25 A I think it was. And none was found.

1 Q Is that what your testimony is?

2 A That's my belief.

3 Q Okay. And did you -- but you didn't test it yourself,  
4 correct?

5 A No.

6 Q All right. That's not -- that's not the area of your  
7 expertise, correct?

8 A Sampling. I've done a lot of fire, soot sampling over  
9 the decades. But I do not do the analysis.

10 Q Okay. And you're not a microscopist?

11 A No, I'm not.

12 Q You didn't do any sampling here, correct?

13 A No.

14 THE COURT: Let's take a lunch break and resume a  
15 little after 12. We'll stand in recess.

16 (A recess was taken.)

17 (The following proceedings were had in the presence of the  
18 jury:)

19 CROSS-EXAMINATION (continued) BY MR. ABRAMS:

20 Q Mr. Schroeder, picking up where we left off -- not where  
21 we left off, just a loose end.

22 You were at the Metropolitan once or twice?

23 A Twice.

24 Q In the times that you were at the Metropolitan, AC was  
25 on in 1 through 4?

1 A I couldn't tell you. I don't know.

2 Q It was inhabited, correct? What I mean by AC -- let me  
3 be more precise. HVAC was on, right?

4 A I'm going to have to presume it is. People were working  
5 in the building.

6 Q And it was inhabited? 1 through 4 was not inhabited?

7 A No.

8 Q Right. I'm sorry. I forgot that.

9 By the time you went -- I apologize.

10 By the time you went to the Metropolitan, it had  
11 already been in the process of being remediated. The walls  
12 had come out and so on, correct?

13 A They had taken the Sheetrock off. They had removed  
14 insulation, yes.

15 Q Okay. I apologize. I forgot about that too.

16 So you were not at the Metropolitan between October  
17 23rd, 2019 -- I'm sorry. October 23rd, 2018 and April 2019,  
18 correct?

19 A That's correct. I was not, not there.

20 Q Right, okay. Right. So by the time you got there and  
21 investigated, it's possible the HVAC wasn't operating just  
22 because people weren't living in 1 through 4 when you went  
23 to -- when you went to investigate, correct?

24 A That's correct.

25 Q Okay. Have you seen this picture before?

1 A I have. I've seen a couple of pictures of this before.

2 Q Okay. From -- and you know this is unit 438, correct?

3 A Yes.

4 Q You know what building that is, what phase?

5 A It's got to be -- 438 would put it in 4.

6 Q Phase 4?

7 A Yes.

8 Q In the back?

9 A Yeah.

10 Q And have you seen the results of the testing from that?

11 A No. I haven't looked at it.

12 Q All right. Let's go back. When we left, we were

13 talking about the HVAC units and the fire alarms.

14 A Yes.

15 Q Okay. And you had indicated that at the time you wrote

16 the report, you thought that they were interconnected and

17 there would be a shutoff, but then you learned that that

18 wasn't the case?

19 A Correct.

20 Q The way they're actually built.

21 A Yes.

22 Q And you understand that the way it was built passed

23 code; it was approved by the city of Birmingham?

24 A They at least gave a temporary certificate of occupancy

25 for the doughnut building, yes.

1 Q Okay.

2 A The complex had not gotten its final certificate of  
3 occupancy.

4 Q But you -- do you understand the 2009 International  
5 Mechanical Code, Section 606.1 on this?

6 A You're asking me to give you a chapter and verse? I  
7 don't have that in my head. If you have it, we can talk about  
8 it.

9 Q That's fair. But that's not your area of expertise,  
10 building codes?

11 A Oh, I have been formally trained on building codes,  
12 absolutely.

13 Q Okay.

14 A Totally.

15 Q All right. So then maybe you are familiar.

16 So do you know that the way that the system was  
17 built with not the interlocking change off -- between the fire  
18 alarm and the HVAC met the 2009 International Building --  
19 International Mechanical Code?

20 A Apparently it passed Birmingham's approval because they  
21 gave it a temporary certificate of occupancy.

22 Q Okay. So Birmingham did approve it, but you don't know,  
23 sitting here today, if that's compliant with the 2009  
24 International Mechanical Code?

25 A Can I see if I cited it?

1 Q Yeah. You can refer to your report any time you want.

2 A Okay. Bear with me a moment, please.

3 Q Take your time.

4 A I don't see that I've cited it. If I have, I'm not  
5 finding it.

6 Q That's fine. Mr. -- I'm sorry. Dr. Schroeder, my  
7 question was, you don't know -- and I'm not expecting you to  
8 know it, and I wasn't saying that it was in your report.

9 But my question simply is, is the way that it was  
10 built, that aspect of the way the Metropolitan was built, do  
11 you know if that complied with the 2009 code?

12 A Sitting here today, I can't tell you that.

13 Q Okay. Switching subjects.

14 At the time you wrote your report, you were not  
15 aware that the HVAC filters in place at the time of the fire  
16 consisted of fiberglass non-pleated filters with a MERV rating  
17 of 4, correct?

18 A Could you say the last part again? Fiberglass filters  
19 with --

20 Q A MERV rating of 4. Do you know what MERV is, M-E-R-V?

21 A I can guess, but I'm not going to guess. The filtration  
22 factor was not the best. It's not like HEPA.

23 Q Okay. And -- but, again, I don't want to get in an area  
24 where you're not comfortable with, it's not your expertise.  
25 You don't know what MERV stands for?

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1 A I don't.

2 Q And am I correct that at the time, you didn't -- well,  
3 at the time you wrote your report, you weren't aware of --  
4 well, I'll tell you what MERV is. MERV is the minimum  
5 efficiency rating value. Does that ring a bell?

6 A That sounds right.

7 Q And at the time you wrote your report, you didn't know  
8 what the MERV rating was for the fiberglass non-pleated  
9 filters, correct?

10 A I did not address it in my report, but I believe that  
11 Mr. Irmiter did address it in his.

12 Q Okay. But that's not something that you were aware of  
13 in your conclusions -- in drawing your conclusions?

14 A It's nothing that I wrote about.

15 Q Okay. All right. When you -- again, when you inspected  
16 the units at the Metropolitan in October of 2020, many had  
17 already been rebuilt and -- correct?

18 A Oh, my gosh. When I was there, the building was just  
19 being completely torn apart. Yeah, there was nobody living in  
20 that building when I was there.

21 Q All right. And some of it was being rebuilt at the time  
22 you saw it in October of 2020, correct?

23 A A lot of the exterior envelope within the courtyard had  
24 rotted out, yeah. There was extensive work going on there.

25 Q Right. And the interiors too, correct?

1 A They had boned them, yes.

2 Q Okay. And, again, you didn't have the ability to see  
3 the as-built construction of the Metropolitan at the time of  
4 the fire, correct?

5 A Frankly, none of us would have seen that unless we were  
6 on the job site on a daily basis.

7 Q Right. Or shortly after the fire, correct?

8 A No, no. That's not correct. We would have seen -- if  
9 you and I had been there on the 2nd of October 2018 and walked  
10 through, we would have seen the conditions that we could see.

11 Q All right. No, my question was, you could -- you didn't  
12 have the ability to do that?

13 A No, I did not.

14 Q Right. Okay. And you couldn't tell whether there were  
15 missing fire stops in buildings 1 through 4, correct?

16 A Oh, no. Buildings 1 through 4, when it came to fire  
17 separation walls, they were there. If you're talking about  
18 blocking, fire blocking in stub walls, yeah. I noticed that  
19 post-fire in the tall stub walls, they were putting fire  
20 blocking in. It's a stiffener as well as keeping fire  
21 movement vertically within the stub wall chamber.

22 Q But you weren't able to visibly inspect whether there  
23 were unit separations between the floors, correct?

24 A If there were unit separations between the floors?

25 Q Between the floors and the hallways.

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1 A Oh, my God. They were there, absolutely.

2 Q Okay. And you're basing that on some photos that you  
3 saw, right?

4 A I'm basing that on the plans, the photos -- hold on --  
5 the city of Birmingham, and what I saw, physically saw on site  
6 when I was there.

7 Q Okay. So let's take them one by one. Plans are just  
8 plans; they're not as-builts, correct? Correct?

9 A Sure.

10 Q You're going to have something on a plan, but it doesn't  
11 reflect the way it's actually built, correct?

12 A There are details that don't get captured, yes.

13 Q And when you were there in two-plus years after the  
14 fire, it would have been in the process of being rebuilt,  
15 correct, 1 through 4?

16 A Yes. The focus was on the exterior; but, yes, it was  
17 being built.

18 Q Let me ask you about insulation. At the time you wrote  
19 your report, you were not aware about the way the insulation  
20 assemblies had been placed in the Metropolitan, correct?

21 A No. I wouldn't say that at all.

22 Q Did you actually see it with your own eyes?

23 A Yeah. I saw insulation with my own eyes.

24 Q Shortly after the time of the fire or --

25 A No, I was there.

1 Q Or two years later?

2 A When I was there.

3 Q Two years later?

4 A Yep.

5 Q Do you know if there was any changes to the insulation  
6 within the two years between the fire and when you were there?

7 A Sure. If we look at the photographs taken after the  
8 fire, and there were over 6,000 taken by BCCM, you can see  
9 where they've gone in when I got there and they'd already  
10 removed the insulation. In fact, they had gone in and sprayed  
11 Kilz on a lot of the walls as well.

12 Q Okay. So you were able only to physically with your own  
13 eyes see the insulation, touch it two-plus years after the  
14 fire, correct?

15 A Again, I didn't -- I'm sorry. I didn't hear the first  
16 part of the question.

17 Q You were only able to see with your own eyes, touch it  
18 two-plus years after the fire, correct?

19 A That's when I was in the building, but there were plenty  
20 of people documenting before I got in the building.

21 Q Right, right. Including one of them is Mr. Irmiter,  
22 correct, who was in there?

23 A Sure.

24 Q All right. Let's switch subjects now.

25 The -- let's talk about the water in phase 5.

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1 MR. ABRAMS: And if we could go, please, to slide  
2 25, Melissa.

3 THE WITNESS: Can you direct me to a page?

4 Q (BY MR. ABRAMS) You should have it right on your screen.  
5 This is not necessarily from your report.

6 A Okay.

7 Q I didn't cross-reference it to your report, but I know  
8 you've looked at many photographs that are not in your report,  
9 correct?

10 A Uh-huh.

11 Q So, Mr. Schroeder, do you recognize that this is a  
12 photograph of phase 5 in the day or days after the fire?

13 A Yeah. This photograph was likely taken on the 2nd of  
14 October.

15 Q Okay.

16 A 2018.

17 Q Couple days after the fire?

18 A Yes.

19 Q All right. And we see moisture on the floor there?

20 A Yep.

21 Q Okay.

22 MR. ABRAMS: If you'd go to the next slide, Melissa.

23 Q (BY MR. ABRAMS) Do you recognize this photograph?

24 A I do.

25 Q All right. This is from the Birmingham Fire Department,  
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1 correct?

2 A Yes.

3 Q And you think this is taken same time period, five days  
4 after the fire?

5 A If not sooner.

6 Q Okay.

7 A It might be taken on the day of the fire actually.

8 Q But the one before was not?

9 A No.

10 Q Okay. You know that one was taken five days after?

11 A Yeah, the 2nd.

12 Q The 2nd. This one was either taken the day after the  
13 fire or soon thereafter?

14 A I think it was taken the day of the fire. That's when  
15 the crews -- the investigators were going through on their  
16 initial.

17 Q Okay. And we see water in phase 5, correct?

18 A Yes.

19 MR. ABRAMS: If you go to the next slide.

20 Q (BY MR. ABRAMS) All right. Do you recognize this photo?

21 A This was taken on the 2nd.

22 Q The 2nd of October?

23 A Yeah.

24 Q Birmingham Fire Department?

25 A No. Veritas.

1 Q Veritas. Okay. And we see water on the floor --

2 A We do.

3 Q -- in this photograph, correct?

4 A Yes.

5 Q And just to be clear, you don't dispute that there's  
6 water from firefighting efforts in phase 5 after the fire,  
7 correct?

8 A No. I would expect to find some water in there, yes.

9 Q All right. And you are not -- you're not an expert in  
10 OSB board and how long it's supposed to last and when it  
11 deteriorates, correct?

12 A I've certainly not reviewed research from that question  
13 for this case, that's correct.

14 Q Or in general. That's not an area of your expertise?

15 A You know, when it comes to material science, yes, that  
16 can be an area of my expertise, but I haven't -- I haven't  
17 looked into it for this case.

18 Q Okay. What's OSB stand for?

19 A Oriented strand board.

20 Q And how long is oriented strand board supposed to last  
21 before it deteriorates if it's exposed to water typically?

22 A Can't give you a hard time on that. It depends upon --  
23 in one case, the volume of water, the duration of exposure,  
24 whether there's ponding.

25 Q Okay.

1       A       There's a lot of factors that come into it, just more  
2       than being sprayed with water.

3       Q       Okay. And where are we looking at in phase 5 here?

4       A       This would be -- if we had a map -- I was talking this  
5       morning about the cutout in the eve. This is in that -- I  
6       hate to use the term "courtyard area," but I think that's the  
7       best description in phase 5.

8       Q       We used courtyard a couple of times, but I think we know  
9       what you're saying.

10      A       Okay.

11               MR. ABRAMS: I'll pass the witness.

12               MR. ELY: Brief redirect, Your Honor.

13               THE COURT: Okay.

14               MR. ELY: Let me pull up Plaintiff's Exhibit 1, page  
15       16, please.

16       REDIRECT EXAMINATION BY MR. ELY:

17       Q       I'll start with something else, Dr. Schroeder, while  
18       we're pulling that up.

19               There was the question to you about the cloud cover  
20       on the night of the fire.

21       A       Correct.

22       Q       I believe the discussion was 800 feet. You tended to  
23       agree with that.

24               Can you elaborate and tell us how that may or may  
25       not have impacted your analysis of the fire dynamics of that



1 fire?

2 A Sure. And I think of this as a pilot. If a cloud  
3 depth -- so that the ceiling from the ground is 800 feet and  
4 the depth of the clouds is 500. So now we're at 1,300 feet  
5 above ground.

6 The power of this plume, the energy, the heat is  
7 going to blast right through that cloud depth. And if we were  
8 flying along, we would literally see above the clouds this  
9 plume finding its way up. We'd see it.

10 Q Okay. So just so I'm clear, the clouds didn't serve as  
11 some sort of ceiling?

12 A No.

13 Q Okay.

14 A No.

15 Q And one thing, you used a word that I want to make sure  
16 I understand. When you were showing some outside pictures of  
17 the roof and darkened areas, you used the term "organics"?

18 A Yes.

19 Q What's that mean for the rest of us?

20 A It's stuff that we have in the air as a result of  
21 vegetation and pollution, and that's what I call organics.  
22 This is not a smoke deposit.

23 Q Okay. So I want to look at Plaintiff's Exhibit 1. I  
24 believe this was up when Mr. Abrams was talking to you, and  
25 you had some additional things you wanted to say.

1 MR. ELY: Can you go to page 16 of this, please.

2 And the narrative text section, could you blow that  
3 up. Down below. Right here. Thank you.

4 Q (BY MR. ELY) I believe this is what you were reviewing  
5 with Mr. Abrams. Maybe it wasn't?

6 A No.

7 Q Let me back up.

8 A I had asked him to show the previous page just so I  
9 could understand where the narrative was coming from.

10 MR. ELY: Let's go back one page.

11 A Okay. And it was down here that I was asking him about  
12 and it's -- the narrative name is Q22. That's quint 22. So  
13 they are describing what they encountered upon arrival, and  
14 that's what our discussion was about.

15 Q (BY MR. ELY) Was there anything you wanted to add about  
16 that?

17 A No. I just wanted you to know the source.

18 MR. ELY: Thank you, Dr. Schroeder.

19 MR. ABRAMS: Nothing further, Your Honor.

20 THE COURT: You can step down.

21 THE WITNESS: Thank you.

22 MR. ELY: Defendant calls Chris Spicer, Your Honor.

23 RUSSELL CHRISTOPHER SPICER, being duly sworn by the courtroom  
24 deputy, testified:

25 DIRECT EXAMINATION BY MR. ELY:

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1 Q Could you state your name for the record, please.

2 A Russell Christopher Spicer.

3 Q Mr. Spicer, where do you reside?

4 A St. Simons Island, Georgia.

5 Q Okay. Can you tell me where you're currently employed?

6 A I'm self-employed.

7 Q And what is your profession?

8 A I am a certified industrial hygienist.

9 Q Okay. And by "certified," what do you mean by that?

10 A That's a designation attributed by the American Board of  
11 Industrial Hygiene for a person who has demonstrated  
12 proficiency in the field of industrial hygiene, which is the  
13 recognition, evaluation, and control of occupational and  
14 environmental hazards.

15 Q And to become certified as an industrial hygienist, can  
16 you walk us through kind of the process you had to go through  
17 to do that?

18 A To become a certified industrial hygienist, one must  
19 have at least an undergraduate degree in engineering, science,  
20 chemistry, physics, or public health or related field, five  
21 years of experience in -- under the direct observation and  
22 control of a certified industrial hygienist.

23 At that point, one may apply to the board for  
24 acceptance to take the examination. As part of that  
25 application, there must be a sign-off from the supervising

1 industrial hygienist. Then upon acceptance or completion of  
2 the examination, one is designated ACIH.

3 Q When did you become a certified industrial hygienist?

4 A 1989.

5 Q Okay. And you have maintained that certification  
6 continuously since then?

7 A Yes, sir.

8 Q And presently have it?

9 A Yes.

10 Q So let me back up. And can you just tell us briefly  
11 your educational background?

12 A I have a -- as I said, an undergraduate degree in  
13 biology from the University of Delaware and a master's in  
14 environmental studies from Rowan University.

15 Q And do you presently hold any specific certifications?

16 A Yes.

17 Q Okay. Tell me about those certifications you hold now.

18 A In addition to the CIH, I'm also a certified safety  
19 professional, CSP, which is a designation given by the Board  
20 of Certified Safety Professionals or BCSP. I also have  
21 several subspecialty certifications given by other  
22 organizations, which fall under the general practice of  
23 industrial hygiene.

24 I'm currently a certified smoke and fire damage  
25 consultant. That's given by the American Council of

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1 Accredited Certification, ACAC.

2 Q Do you presently serve on any professional committees?

3 A I do.

4 Q Tell me about that.

5 A I currently serve as a member of -- on the subcommittee  
6 for a wildfire evaluation standard being promulgated by the  
7 Institute of Inspection, Cleaning, and Restoration  
8 Certification or IICRC. And that standard is currently  
9 designated as S760.

10 Q So tell me, what is the IICRC? What do they do?

11 A IICRC is the umbrella organization for the restoration  
12 industry. That would be people who evaluate and then address  
13 cleanup in buildings that have sustained water damage, fire  
14 damage, or other catastrophic events similar to that.

15 Q And so am I correct that you're serving on a committee  
16 that is in the process of developing a standard writing 7S60  
17 with the IICRC?

18 A That is correct.

19 Q And that is for what?

20 A This subcommittee that I serve on is essentially set up  
21 to establish standards for inspection, evaluation, and  
22 sampling for post-fire assessment.

23 Q Okay. How many folks are on that committee?

24 A Approximately 12 to 15 are on that subcommittee. Then  
25 there's another subcommittee, which is on the restoration

720

1 side.

2 Q Okay. So I believe you mentioned that you are  
3 self-employed?

4 A Yes, sir.

5 Q How long have you been self-employed?

6 A Approximately a year.

7 Q And you're still working as an industrial hygienist?

8 A Correct.

9 Q Okay. How long have you been actively working as an  
10 industrial hygienist?

11 A Since 1982, which would be 41 years, I guess.

12 Q Okay. So if you could, could you just please inform us  
13 a little bit -- we've heard the terms "industrial hygienist"  
14 and "industrial hygiene" thrown around a lot in this trial.  
15 Can you kind of explain to us what that field is, what it  
16 comprises?

17 A Yes. It's a -- it's the practical application of  
18 various scientific disciplines through, again, the  
19 recognition, evaluation, and control of hazards, occupational  
20 and environmental hazards. The -- perhaps to give a better  
21 feel for that would be to point to some of the sub-areas that  
22 are tested for the CIH examination.

23 So there are chemical hazards, noise hazards,  
24 environmental controls, biological hazards, community  
25 stressors such as hazardous waste.

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1           In my particular area, I've concentrated on pretty  
2 much the hazards involved in construction and also hazards  
3 that occur after certain, again, catastrophic events, which in  
4 my particular case I've done a lot of work in the asbestos  
5 removal industry, asbestos assessment industry, water damage  
6 and mold and fire and smoke.

7       Q     Okay. So you've been -- and you've been practicing in  
8 the field of industrial hygiene now for 41 years continuously?

9       A     Yes, sir.

10      Q     And before you became self-employed, were you employed  
11 at Gallagher Bassett?

12      A     I was.

13      Q     Company called Gallagher Bassett. What does Gallagher  
14 Bassett do?

15      A     It was actually Gallagher Bassett Technical Services.  
16 We were a subsidiary of Gallagher Bassett, which is an  
17 insurance broker, large insurance, international insurance  
18 broker. We were the technical industrial hygiene  
19 environmental arm of that company.

20            I served as the director of industrial hygiene for  
21 the three years that we were with Gallagher Bassett. Prior to  
22 that, I was a partner in an environmental consulting firm that  
23 was incorporated into Gallagher Bassett.

24      Q     And how many people did you have working under you at  
25 Gallagher Bassett when you left?

1       A       I served as the technical lead in the company. So  
2 essentially everyone; but generally there were about 25  
3 technical people that I had some control over.

4       Q       Okay. So let's talk about this case.

5               Tell me when you were initially contacted by  
6 Travelers and what you were asked to do.

7       A       Shortly after the fire in 2018, which would have been in  
8 early 2019, I was contacted to evaluate the post-fire  
9 conditions at the Metropolitan Apartment complex in  
10 Birmingham, Alabama.

11      Q       Well, specifically with regard to the post-fire  
12 conditions, were you given any sort of information about what  
13 the claims were?

14      A       Yes.

15      Q       Tell me about that.

16      A       I was given a report to review, which was an assessment  
17 of that facility with regards to water damage, and more  
18 specifically, smoke and fire damage as a result of the fire  
19 that was exterior to the general complex.

20      Q       Okay. So what was your -- what was your understanding  
21 of the extent of the claimed damage from soot and char?

22      A       The -- as per the report that I reviewed, there was the  
23 allegation that there was widespread smoke and -- smoke damage  
24 and water damage throughout these apartments, which the  
25 recommendation was that a lot of demolition was necessary to

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1 effectively address.

2 Q Okay. So does -- do you know what day you came out to  
3 the facility the first time?

4 A Not specifically. I think it was May of 2019.

5 Q June 13th ring a bell?

6 A Yes.

7 Q Okay. So you had received an initial report from the  
8 plaintiff, Maxus, about their assessment, their -- FBS's  
9 assessment of soot and char damage from the phase 6 fire in  
10 the other areas of the Metropolitan before you arrived?

11 A That is correct.

12 Q And do you recall having an understanding of how this  
13 was supposed to have happened; meaning, the soot and char  
14 infiltration into the other areas?

15 A Yes.

16 Q Tell me about that, please.

17 A The complex was composed of a series of buildings that  
18 were -- what they call phases 1 through 5, was contiguous in  
19 basically a horseshoe shape. Then separate from those five  
20 phases, there was a building 6, which was not really within  
21 the same building envelope. It was connected by a walkway.

22 Building 6 sustained a significant fire. I believe  
23 it was arson. But it burned to the ground so that the smoke  
24 and -- that was emitted from building 6 destruction allegedly  
25 impacted the remainder of the buildings in that complex.

1 Q Do you recall, was there a mechanism for infiltration  
2 given in that initial report or mechanisms?

3 A Yes. The mechanism was that there was, for lack of a  
4 better term, a vortex; in other words, a plume of smoke and  
5 fire debris that was emitted into the atmosphere and then  
6 surrounded the buildings so that these buildings were  
7 reportedly enveloped in smoke. And then the smoke was -- had  
8 infiltrated through the exterior, what we call the building  
9 envelope of the remainder of the complex.

10 Q Okay. So in anticipation of your visit on June the  
11 13th, what did you do to prepare?

12 A I read the report and formed in my mind kind of -- not  
13 an assumption, but what I expected to see as a result of this.  
14 I went to the facility, anticipating that I would be  
15 attempting in some way to assess the extent of damage, smoke  
16 damage in that facility.

17 Q Okay. So you arrive on the site on June the 13th. Do  
18 you remember who was there with you?

19 A Not specifically. I remember there were some  
20 individuals from JSL.

21 Q Okay. JSL being the building expert for Travelers?

22 A Yes. I believe one of the individuals was a fellow --  
23 professional by the name of Tom Sumner. I believe he was  
24 there.

25 Q Okay. So take us through -- let's start in the doughnut

1 building, and take us through kind of what you did in there,  
2 what your inspection entailed in that -- and at the time you  
3 were there, it was finished space, correct?

4 A Yes.

5 Q And there were tenants living in there?

6 A In some, yes.

7 Q So take us through what you did in the doughnut building  
8 in terms of your inspection that day.

9 A Well, the first thing I did when I arrived at the site  
10 was I looked at the general environmental surroundings.  
11 Because in these circumstances when an assessment for smoke  
12 damage is necessary, sometimes there may be testing involved.  
13 And in this particular case, there was. It had been reported  
14 back from the FBS report.

15 So that the first thing I did was actually look at  
16 the surroundings to see what other potential confounding  
17 sources may exist in that area with regards to soot and char,  
18 which are the main constituents of smoke that we look for in  
19 post-fire evaluation, because that may contribute to the  
20 background, so that we want to make sure that we put any  
21 testing that is conducted into the proper context.

22 But after I had an assessment of the -- assessment  
23 of the general conditions, then we did a visual inspection,  
24 walk-through of the entire facility, which starting in -- I  
25 believe in the occupied spaces, the doughnut, what we call the

1 doughnut building, phases 1 through 4. And we -- but we also  
2 looked at 5 and also looked in the -- again, visual  
3 walk-through inspection of the -- some of the common areas as  
4 well as the roof on building 5.

5 Q Okay. And you mentioned the word "background." I want  
6 to go back to that. If you could, give us an explanation of  
7 what you mean by that.

8 A The main constituents or combustion residual that we  
9 look for in a post-fire assessment are what we call char and  
10 soot. Char are basically irregular fragments that sometimes  
11 under the microscope, they have some of the same  
12 characteristics of the fuel. For example, if it's a wildfire,  
13 there may be some indications of leaf structure or something  
14 in char.

15 And then the other constituent is soot, which is a  
16 very fine black powder which is produced as a result of  
17 combustion in essentially any process, any combustion process  
18 that we have in the industrialized world. So they have  
19 stacks, smokestacks, automobile exhaust, backyard fires,  
20 barbecues, even areas from wood fire and fireplaces. So it  
21 all emits some degree of those combustion particulates into  
22 the general atmosphere, and then they will settle. And it  
23 varies across the country as far as how much of that is there.

24 Q So is background -- in your world, is background  
25 combustion byproducts from all these different sources that we

1 live with every day?

2 A Yes.

3 Q And so as part of what you're doing, you're trying to  
4 figure out what background sources may be there, the normal,  
5 everyday combustion sources, versus whether it's related to a  
6 fire?

7 A In a context of possibly having to do testing or  
8 evaluating any testing that may have been done, that's  
9 correct.

10 Q You mentioned that you made an assessment of the  
11 environment around Metropolitan. Tell me about that.

12 A Well, I also did some, you know, for lack of a better  
13 term, Google or internet research on what were the industrial  
14 operations in that area, in the Birmingham area historically  
15 and currently. So I got a feel for, again, what the general  
16 emissions would have been as a general environmental pollutant  
17 in that area.

18 Q Okay. And just as kind of a matter of principle, the  
19 Metropolitan is located in an urban area, correct?

20 A It is in the approximate -- I believe the approximate  
21 middle of Birmingham, Alabama, that's correct.

22 Q And with respect to these background combustion  
23 byproducts, are they more prevalent in urban areas than they  
24 are, say, outside of town?

25 A Yeah. That's generally accepted, yes, sir. And  
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1 Birmingham has historically been called the Pittsburg of the  
2 south. Birmingham has a long history of steel production and  
3 heavy industry in that area. And I believe there's a coke  
4 foundry even in some -- within a short distance.

5 Q Okay.

6 A Maybe a few miles.

7 Q Okay. So take us through the inspection. How many  
8 units did you go in?

9 A I looked at 31 units, 31 residential units in addition  
10 to the space in phase 5, which was not complete at the time,  
11 and the common areas and the roof area.

12 Q Okay. So with respect to the -- and I'll call it the  
13 doughnut building, phases 1 through 4, the finished space.  
14 With respect to the units that you went through, tell me --  
15 first of all, tell me what you're looking for.

16 A Well, the units that we looked at were -- I looked at  
17 the FBS report and tried to concentrate, as access would  
18 permit us, on the areas that they had either done testing or  
19 had reported on. So we -- I centered the 31 units that we  
20 evaluated based on that guidance, so to speak.

21 And when these circumstances occur in a post-fire  
22 situation, typically we're looking for visual surface impact.  
23 I think we all, as a common experience, would recognize that.  
24 For example, above a candle if we hold a flat surface, there  
25 would be a black deposition on that surface.

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1           So it's very similar to that. You would see soot  
2 and/or other fine particulate on various horizontal surfaces,  
3 under doors, within closets, on top of window ledges. So when  
4 we do it in an inspection like this, we try to visualize what  
5 would have been the pathways into this space, and then look  
6 for the visual signs that that had occurred.

7           And in addition to that, depending on a number of  
8 factors, could be the location, could be the relative  
9 humidity, could be location and time since the fire. There  
10 may or may not be that characteristic smoke or acrid odor, I  
11 think, that we're all familiar with when something is burnt.

12       Q     So is it correct that the first thing you were looking  
13 for was using your sight and smell?

14       A     Correct. And that is consistent with all the current  
15 guidelines out there in this field.

16       Q     And it's your opinion that that's the industry standard?

17       A     Correct. That's the primary evaluative tool, that's  
18 correct.

19       Q     So -- and you mentioned that you looked -- so let's walk  
20 through the apartments. And you mentioned you're looking for  
21 points of entry, correct?

22       A     Correct. Under doors or over doors, around diffusers or  
23 what we -- vents, air vents. Sometimes you'll see black trail  
24 or black sooting around that. It would be airflow patterns.  
25 Around the windows, because that's -- typically windows,

1     although they are supposed to be airtight, seldom are.

2                 So there may be -- again, in this case the alleged  
3     route of entry was through the perimeter.  So around windows,  
4     below windows, on the top ledges, on the window ledges  
5     themselves or in the window frames would be a logical place to  
6     look, which I did.

7     Q     Okay.  And so based on the information you had before  
8     you arrived, what were you expecting to find in these  
9     individual units?

10    A     I was expecting to see an area within the building or  
11    units that showed a definite soot discoloration or blackening  
12    or some indication that there had been entry of smoke into  
13    that space.  And perhaps as I walked through the facility,  
14    maybe it would degrade or I wouldn't see as much.

15                 Again, these kinds of situations, it's usually  
16    pretty obvious when there's been smoke or a fire impact other  
17    than physical damage, which I think we all recognize the  
18    charring and so on.  But as you get further away, when there  
19    are concerns about smoke infiltration in occupied spaces,  
20    there will be signs that that has occurred.

21    Q     Okay.  And those signs are in the form of what?

22    A     Again, visual and smell.

23    Q     Are they -- I mean, smoke leave a trail?

24    A     I'm sorry?

25    Q     Does smoke leave a trail?



1       A       It may or may not, depending on how it comes in. I  
2 mean, there may be large areas that are -- have a black  
3 sooting. There may be what we call ghosting where there may  
4 have been some furniture or some item in the space, and then  
5 the smoke tends to -- because of the thermal and electrostatic  
6 forces, it tends to ghost or shadow around that.

7               It all depends. There would be obvious indications  
8 based on, again, your -- the theories or the presumptions we  
9 have about what were the sources, where the fire was, how --  
10 you know, how hot was it, and where the routes of entry were  
11 likely to have been.

12       Q       In addition to the individual things that you mentioned  
13 that you expect to see the evidence of smoke infiltration, in  
14 terms of the scope and the frequency, what were you expecting  
15 when you went?

16       A       I was expecting to see some very obvious signs of smoke,  
17 at least in some areas of the particularly occupied space in 1  
18 through 4.

19       Q       And based on your inspection of 31 units, you looked at  
20 the corridors also?

21       A       We did. As we -- that was part of it. As we obviously  
22 walked from one area to the other as these spaces became  
23 available to us and, you know, conducted inspections while --  
24 during that process as well.

25       Q       Is there carpet in this building?

1       A       I don't -- there was carpeting, I think, in the main  
2 conference room that we, I think, gathered in in the morning.  
3 I think that was the only place that I recall. The rest of it  
4 I don't believe had carpeting.

5       Q       Okay. So based on your inspection of the 31 units in  
6 the doughnut building, tell us what you found.

7       A       I didn't see any indications -- I didn't detect any odor  
8 at all. And this is, again, detailed in my report. And I did  
9 not see any indications, you know, of what I would have  
10 attributed to smoke infiltration from an event.

11      Q       Okay. Now, the phases 4 and 5, those phases were in a  
12 different stage of construction when you were there in June of  
13 '19, correct?

14      A       Correct. Phase 6 is essentially a separate building.  
15 It's not within the same envelope of the rest of the complex,  
16 so that it's almost like an exterior point source as opposed  
17 to an indoor fire.

18      Q       Okay. So my question back to you is, what were the  
19 stages of construction of phases 4 and 5?

20      A       I don't remember specifically. I know that the entire  
21 facility was in various stages of construction. Some areas  
22 were completed; some were not. I remember looking in two  
23 units that were occupied, and I remember looking at my notes  
24 that were -- again, there were various areas of completion of  
25 construction throughout the complex.

1 Q So do you remember that phase 5 was in a framed-in  
2 stage?

3 A Yes. Phase 5 was not framed in. I'm sorry. It had  
4 framing. It was not -- the walls were not completed.

5 Q All right. So tell me in these unfinished spaces where  
6 the walls were not in, tell me what your observations were of  
7 those areas.

8 A That would be 5, phase 5?

9 Q Yeah, phase 5. Phase 5 is closer to the fire; is that  
10 correct?

11 A Phase 5 was immediately -- well, not immediately, but in  
12 proximity to the building that burned, phase 6.

13 And on the wall area that was immediately adjacent  
14 to 6 or where 6 was at the time, there was evidence of water  
15 intrusion. There was black and darkening on that wall on  
16 various members. I had some difficulty differentiating  
17 whether it was water -- it looked like most of it was water  
18 damage.

19 Obviously soot is dark and black; so it may be a  
20 mixture there. But that was the only area that I really saw  
21 any significant impact. The rest of it was just pretty much  
22 of an open construction area.

23 Q And, again, within phase 5, which was closer to the  
24 fire, based on what you understand the claims were, were you  
25 surprised at what you saw?

1 A Relative to the FBS report, certainly.

2 Q Okay. So at some point after your initial inspection --  
3 how long did the initial inspection take, do you think?

4 A I was there several hours.

5 Q Okay.

6 A Between the units and looking at the roof.

7 Q Okay. So did you go on all four floors, all the phases?

8 A Eventually I did. I don't recall that I did that day,  
9 but I know I had a second site visit where I looked at  
10 pretty -- because we did some testing. We did testing on all  
11 levels.

12 Q Did you go on the roof?

13 A On the first inspection, yes, sir.

14 Q What were you looking for on the roof?

15 A Just for my own edification, just some sort of  
16 indication of the severity of the fire and the impact on the  
17 building. I'm not an expert in that area, but I thought it  
18 would be good to look at.

19 Q Okay. So after you concluded your initial  
20 investigation, at some point you gave to Travelers your  
21 preliminary impressions?

22 A Yes, sir, I did.

23 Q Tell me about what those were.

24 A Prior to my report?

25 Q Tell me what they were in the August 2nd report.

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1       A       I didn't see any impact. There was no indication of  
2 impact that I could discern from my inspection in -- outside  
3 of that small area in building -- phase 5, which I had  
4 previously indicated. The rest of the facility, I did not see  
5 any impact from smoke. There was no evidence, based on the  
6 protocols that we follow in this industry, that there was an  
7 impact in those spaces.

8       Q       Okay. And also as part of that report, did you evaluate  
9 the FBS findings for Travelers?

10      A       I did.

11      Q       And you had some criticisms of FBS's analysis, correct?

12      A       I did, yes, sir.

13      Q       Tell us what those were.

14      A       The primary consideration was that I felt FBS, for lack  
15 of a better term, reduced their evaluation to strictly an  
16 environmental testing exercise. The testing in this field is  
17 not exact or very precise. There are no absolute standards.  
18 The data that is reported theoretically from the same sample  
19 by five different laboratories could be very different.

20               There is no standard metric by which the impact is  
21 assessed. For example, we'll see numbers, for example,  
22 3-percent char or 5-percent char in a sample. That number is  
23 highly variable. Again, that's not standard in the industry  
24 because some laboratories will also report actual counts of  
25 soot and char versus percent. Percent is really a relative

1 standard. It's not an absolute number.

2           So the numbers and the really science behind it is  
3 not real precise. This is not to be confused with like a  
4 medical test for cholesterol or something where you can pretty  
5 much get the same number regardless of, you know, who you go  
6 to or have it analyzed. It's going to be -- fall within a  
7 very tight range and cholesterol is specifically identified.  
8 It's not the case here.

9           As a result of that, the primary criterion, again,  
10 as stated in parallel industry documents, for example, mold  
11 and fungi, but also for fire. For example, the AIHA Wildfire  
12 Guide, which was published in 2018, specifically state that  
13 primary evaluation tool is visual inspection, and any testing  
14 that is done should be done very judiciously, very carefully,  
15 and it is only a secondary or confirmatory type exercise to  
16 be -- again, there's no absolute test, no black-and-white test  
17 that can say this is a problem or is not a problem at this  
18 level.

19       Q     So in that context, what was specifically your criticism  
20 of FBS and what they had done?

21       A     I didn't see anything in there. Of course, this was  
22 confirmed through my visual inspection. I didn't see  
23 anything, any sound visual inspection or assessment of  
24 conditions. It was just a bunch of data that was produced  
25 with laboratory data that was generated in one of the many

1 ways that we see in this industry. Again, so it's not  
2 standardized, and it was not consistently reported.

3 Q Okay. So after you provided Travelers with your August  
4 2nd findings, you were asked to go out and conduct additional  
5 sampling, correct?

6 A I was.

7 Q Okay. And so walk me through the process of how you  
8 arrive at a sampling protocol that -- I believe that sampling  
9 took place on September 30th, 2019. Does that ring a bell?

10 A Yes.

11 Q Okay. So walk me through how you came up with that  
12 protocol. How does one do that?

13 A Very carefully. The first thing I did was try to  
14 establish a hypothesis as to what I was trying to determine.  
15 This was a little bit -- this is different from a standard  
16 post-fire assessment because in general what happens is we  
17 want to look at -- try to get an idea of the extent of alleged  
18 smoke contamination.

19 In this particular case, this was a fire that did  
20 not -- this was a hybrid fire. So the guidelines that we have  
21 out there are either for wildfire or for other circumstances.  
22 This was a hybrid fire. It was an external fire but a  
23 structural fire. So structural materials were the primary  
24 fuel, but it wasn't within the same envelope as the rest of  
25 the building.

1           So consequently, the dynamics of how the smoke moves  
2 as a result of that and then -- which dictates where you're  
3 going to sample and what you're going to look for is not -- is  
4 kind of a different animal. So I had to look at it that way  
5 and say, All right. What am I really trying to identify?

6           Based on the FBS's assertion that there was soot and  
7 char essentially in every cavity, every space throughout and  
8 in every building cavity, I then contacted a laboratory and  
9 explained the situation, and we came up with a sampling and an  
10 analytical protocol to test that assumption.

11       Q     To make sure that I'm clear, what you were doing was  
12 looking for external infiltration into the wall cavities?  
13 That's what you were testing?

14       A     As -- exactly as per -- and as is indicated in the FBS  
15 report. That was the assertion. That was the assumption, so  
16 that's what I wanted to test. That's correct.

17           Again, I want to point out that the assertion in the  
18 FBS report was that the framing, the wood framing, which is  
19 the wooden studs and also the wooden sheathing, which is what  
20 we call OSB or oriented strand board, needed to be exposed.  
21 So the walls, the interior walls needed to be removed and the  
22 framing of the building exposed so it could be cleaned and  
23 treated.

24           So from that assumption, you know, I deduced that  
25 the hypothesis is really looking at essentially soot, char on

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1 the framing. In this case, the most logical place would be in  
2 the exterior wall cavities based on the hypothesis or based on  
3 the presumptions from the FBS report.

4 Q And in your role as an industrial hygienist, coming up  
5 with a sampling location plan based upon a loss, that's part  
6 of what you're trained to do and have been doing for 40 years;  
7 is that correct?

8 A Yes, sir.

9 Q So let's take a look at Defendant's Exhibit 56 if we  
10 could. I want to briefly run through the sampling locations  
11 that you chose.

12 While we're doing that, can you tell us -- the  
13 laboratory I think you mentioned that you used was a company  
14 called R.J. Lee?

15 A R.J. Lee, correct.

16 Q Are they an accredited laboratory?

17 A Yeah. Rich Lee is very well-known. He's been in the  
18 industry for as long as I -- for well over 40 years. They are  
19 well known as a materials laboratory, and so I contacted them.  
20 I'd used them in the past.

21 MR. ELY: Defendant's Exhibit 156. Let's go to page  
22 2.

23 Q (BY MR. ELY) So briefly, Mr. Spicer, I just want to run  
24 through this quickly. Tell me what you're trying to do here  
25 with the selection of these four sample locations on the first

1 floor.

2 A Yes. And in the -- figuring out the sampling locations,  
3 I had to -- again, within -- you know, there were certain  
4 budgetary restraints as well because this type of testing is  
5 very expensive. It's not the same as standard kind of  
6 post-fire evaluation. This is more of a research type of  
7 effort.

8 So I had essentially 20 samples to work with, I  
9 figured. And within that constraint, looked at the locations  
10 horizontally as well as vertically. So I wanted to get a  
11 representation on all levels as well as what I thought would  
12 be the most likely routes of entry through the exterior,  
13 again, based on the assumptions or the indications from the  
14 FBS report.

15 So in this case here, this is the first floor sample  
16 locations. This is in close proximity to phase 6. Phase 6  
17 was the structure that burned.

18 Q Okay. You mentioned budgetary constraints. Let me back  
19 up and ask this question. With regard to the testing, you  
20 provided a proposal to Travelers?

21 A I did.

22 Q Did you get any pushback on costs?

23 A No.

24 Q So there were no budgetary restraints put on you by  
25 Travelers?

1       A       Absolutely not. I was trying to just be reasonable.  
2       What could I learn with something without conducting a 7th  
3       grade science experiment.

4       Q       Okay. So these are the locations you chose on the first  
5       floor. You're sampling inside the wall cavities, correct?

6       A       Correct.

7       Q       Okay. Let's go to the next page, please.

8               So we see more of them. Can you tell me why you're  
9       in phase 5 sampling?

10      A       Again, phase 5, this is the second floor. I had to make  
11      some conclusions as to where I -- this idea of a smoke plume  
12      and elevation.

13              So on the second floor, I looked at phase 5 and  
14      phase 3. Phase 5 is 17 and 18. So that's immediately  
15      adjacent to phase 6, which was the initial source of the  
16      combustion.

17              So if 17 and 18 would represent theoretically more  
18      impact than -- or a different impact than other areas, perhaps  
19      more testing.

20      Q       Let's go to the next page, please.

21              Again, other sampling locations still in phase 5.  
22      In phase 5, the wall cavities were not closed, were they?

23      A       That's correct.

24      Q       Okay. Let's look at the next page, please.

25              So these would be your sampling locations. Tell me  
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1 with regard to specifically how you sampled. We've heard  
2 mentions of tape lifts. We've heard mentions of wipe samples.  
3 We've heard mentions of SEM tabs.

4 Can you tell me what you selected and how you  
5 selected your sampling means?

6 A I did that in conference with the laboratory people, and  
7 we came up with -- since we wanted to do what's called  
8 transmission electron microscopy in this particular case, then  
9 that requires wipe sampling. So we did some wipe sampling at  
10 each location.

11 In addition to that, we did the traditional, what's  
12 called tape lift sampling, which is, I think by its  
13 description, it's basically a sticky tape or a sticky material  
14 that is -- in this particular case, on a prepared glass slide  
15 and has contact with the surface, and you submit that.

16 And then there was a third sample, which we called  
17 an SEM. That stands for scanning electron microscopy stub.  
18 And that was just a provisional sample that was collected in  
19 the event that the wipe samples were not descriptive for us.

20 Q Mr. Spicer, I want to ask you a couple of questions.  
21 Have you ever in your 41 years sampled in a way to skew  
22 results one way or the other to satisfy a client?

23 A No, sir.

24 Q Did you do that for Travelers here?

25 A No, sir.

1 Q Did you -- when you opened those wall cavities, did you  
2 or anybody in your employ wipe the surface clean, discard the  
3 cleaning material, and then sample afterward?

4 A No, sir.

5 Q Explain to us, if you would, how the -- the step-by-step  
6 process. Did you sample with the wipes first?

7 A In most cases that is my recollection, yes.

8 Q And what were the size of the wipes?

9 A The wipe sample is -- again, I want to clarify this.  
10 It's a wipe sample media. The sampling technique was not  
11 exactly as we would -- I didn't exactly directly wipe the  
12 surface. The wipe sample media was placed onto the surface,  
13 and we tried to tap it or pat it so that it would contact as  
14 much of the surface as possible.

15 The reason for that is there is -- we didn't want to  
16 smear any material, any carbon material that may be in there.  
17 So we then did that and then pulled it off.

18 It's not a -- it's wipe sample media. It's not  
19 really a wipe sampling technique. It's more closely related  
20 to a tape lift, what we call a tape lift. You can't call it  
21 that here because it's not clear tape. It's a hybrid sort of  
22 thing.

23 At any rate, we did that. It's 4 inches by 4  
24 inches. It has a wetness to it, an isopropyl alcohol that's  
25 tapped onto the surface. We pull that off. That is then

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1 folded and then placed into a cuvette. It's a little  
2 container with a top on it that's labeled, documented on site,  
3 and then placed aside for transport.

4 MR. ELY: Can you pull up Plaintiff's Exhibit 16,  
5 photo log 13, page 311, please.

6 Q (BY MR. ELY) Is this -- Mr. Spicer, this is, as you can  
7 see at the top, it's a Forensic Building Science, Inc.  
8 photograph.

9 When you were sampling on September the 30th, were  
10 there employees of FBS with you at that time?

11 A They were in proximity, yes. In some cases they were  
12 close by to take photographs; in other cases they were not.  
13 But they were on site the day we were there, that's correct.

14 Q Okay. And so what we see in figure 77, is this you?

15 A That is correct.

16 Q And it looks as though the -- a piece of Sheetrock has  
17 been cut out?

18 A Correct.

19 Q Insulation has been pulled out into the room. And then  
20 in figure 78, is that an example of the wipe samples you all  
21 were conducting?

22 A That is correct.

23 Q And why were you sampling the back of a cavity?

24 A Again, this was in a wall cavity; so this to us  
25 represented the most likely location of infiltration -- or the

1 result of infiltration since, again, as indicated to us from  
2 FBS, they had asserted that the smoke plume from the  
3 destruction of building 6 had entered into the exterior wall  
4 cavity or through the exterior of the building.

5 So in my mind, the most likely place to find any  
6 indications from the testing procedure would be at the  
7 locations as perimeter as we could reasonably get in the  
8 building.

9 Q Okay. And describe for me, if you would, Mr. Spicer,  
10 how the insulation impacts the migration of combustion  
11 byproducts from the exterior. Would it prevent it from moving  
12 into the front of the wall cavity?

13 A I don't think -- basically what happens, and, again, it  
14 gets to the difference in the types of the fire. Were this a  
15 classical structural fire where there was heavy smoke filling  
16 up the inside and perhaps penetrating from the interior space,  
17 then in that particular case, the fiberglass may act as a  
18 filter or a way of preventing impact onto the structural  
19 surface behind it.

20 Q If this had been an interior fire, interior phase of the  
21 doughnut building, which increases the pressure and the heat  
22 and all that, would you have sampled in different locations  
23 perhaps?

24 A Yes.

25 Q Where would you have sampled?

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1       A       Perhaps at -- again, at areas more representative of the  
2 interior space. For example, on the back side of perhaps the  
3 removed coupon or underneath. We could have removed wall  
4 cover -- outlet covers. They can be sampled from the inside.  
5 It would depend.

6               As part of this -- again, part of what we did here,  
7 and I want to emphasize this as part of the testing, this  
8 was -- I mean, we did testing, that's true. But we also  
9 looked at -- there was a visual inspection involved with this.  
10 So when the fiberglass was removed, we did a visual inspection  
11 of the space as well as the back side of the coupon that was  
12 removed.

13       Q       What were the results of your visual observations of the  
14 wall cavities once you had gotten inside of them?

15       A       In addition to the visual and olfactory, smell, there  
16 was no indication to me that there was an impact from smoke.

17       Q       So let's take a look at Defendant's 33, page 39.

18               Hold up. Sorry. One more question here.

19               With respect to the cutting of the Sheetrock, is  
20 there any way to sample the back of a wall, a closed-in wall  
21 cavity other than cut through the Sheetrock?

22       A       Not to my knowledge.

23       Q       And so there's been -- you've heard criticisms of you in  
24 this case with regard to the samples that you took that  
25 included Sheetrock dust was generated from the saws, correct?



1 You remember seeing that?

2 A Correct.

3 Q Tell me what precautions you took to prevent just that  
4 kind of contamination.

5 A Well, the -- first place, the -- there is some gypsum  
6 board dust that is generated from the process that can be seen  
7 on the floor here. The fact that there was the fiberglass  
8 batt immediately underneath the gypsum board, most of the dust  
9 that we could see was collected or, you know, deposited either  
10 on the floor or on that batt.

11 So, you know, in my mind that batt served as a  
12 pretty good way of preventing any kind of gross contamination  
13 into that space. And then -- or into the wall cavity that  
14 would have affected the sampling.

15 Then we took some -- I took some precaution in  
16 trying to extract that fiberglass batt in a way that wouldn't  
17 generate a lot of dust.

18 Now, that being said, I also want to point out that  
19 the TEM analysis that's done is done on what we call the  
20 aciniform particles. So whether there is dust there or not is  
21 really irrelevant to the analysis that's done on -- I guess  
22 we'll talk about that later -- the actual aciniform particles  
23 that may be in that space.

24 So, you know, it's not -- the contamination is a  
25 concern if we were in a strict tape lift situation. We did

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1 tape lifts as well, but we also had the TEM as a backup, and  
2 then the SEM if we had to go to that.

3 Q So the TEM, the media you used for the TEM analysis,  
4 just so I'm clear, is this wipe that we see in figure 78?

5 A That is correct.

6 Q Okay. And so is there any other way to get a sample for  
7 TEM analysis other than using some kind of wipe media?

8 A The wipe is what was recommended by the laboratory.  
9 There is a -- there are reports of some individuals trying to  
10 do TEM analysis on tape, but it's not very successful and it's  
11 not -- wasn't recommended by the laboratory. So that's a --

12 Q Let's pull up Defendant's Exhibit 33, page 39, please.

13 So as an example, tell me what I'm looking at here.

14 A The top panel is the travel container or cuvette that's  
15 used. Once the wipe material is collected, it is folded and  
16 inserted into this container. It's labeled and then prepared  
17 for transport, stored and prepared for transport.

18 Q Is it your testimony that every wipe sample that you  
19 took at the Metropolitan on September the 30th, 2019, was  
20 placed directly into one of these vials, sent to R.J. Lee, and  
21 examined?

22 A Correct.

23 Q You didn't discard any on the floor? You didn't put any  
24 in the garbage can?

25 A No.

1 Q All of them made it to R.J. Lee and were sampled?

2 A Exactly.

3 Q So let's back back out.

4 Tell me what the bottom photograph is of.

5 A This is the container that has the tape sample. The  
6 tape sample, again, was provided, as it shows here, by R.J.  
7 Lee. There are other ways to collect tape samples. This is  
8 what they preferred; so we used the media that they sent us.

9 It's basically a flexible slide that has an adhesive  
10 to it, and that's -- it's taken from the container. The  
11 adhesive side is contacted with a surface, not the same  
12 surface that we did the wipe sample on, but another surface  
13 close by. And then that's put into this container, again,  
14 labeled, documented, and we took photographs obviously. This  
15 is the laboratory photograph, but we photographed on site as  
16 well. And sent to the laboratory.

17 Q And so inside the wall cavity, you're taking a -- you're  
18 using a wipe sample in one area, taking --

19 A Modified procedure, right.

20 Q Putting it in the vial?

21 A Correct.

22 Q Then you're going back in with a tape sample. You're  
23 going into a different location in the wall cavity than what  
24 you just sampled with the TEM?

25 A Yeah. Not on the same surface, correct.

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1 Q Okay. Let's go to Defendant's Exhibit 33, page --

2 A We also conducted a test, a stub as well on each  
3 location. It's not shown here because it wasn't --

4 Q Okay. Those SEMs, those were never analyzed?

5 A That's correct.

6 Q Why is that?

7 A Based on what the laboratory indicated to us, they said  
8 they -- the TEM analysis was satisfactory to them. They felt  
9 that it was representative of what we had sampled and was not  
10 necessary to conduct the SEM. The TEM also is a little bit  
11 more powerful, has other capabilities that the SEM doesn't.  
12 So that was, you know, unnecessary.

13 MR. ELY: All right. Let's go to page 83 of this  
14 same exhibit, please. Actually can you go to page 75? I'm  
15 sorry. Got the wrong numbers written down.

16 Q (BY MR. ELY) We've been talking about the wipe sample  
17 and the TEM analysis. Is this an example of what you're  
18 talking about?

19 A Yes. This is what arrived at the laboratory.

20 Q Okay. And the material on the sample looks like R.J.  
21 Lee. Is R.J. Lee the company that cuts those pieces out?

22 A Yes. We don't do that. That's done strictly by the  
23 laboratory.

24 Q Okay. So go to page 83.

25 And is this -- tell me what I'm looking at here.  
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1       A       This is the -- on the left is the transmission electron  
2 microscopy image. Light microscopy is only able to, for lack  
3 of a better term, magnify to about 400. That's what the  
4 traditional counting and assessment is done, at about 400 with  
5 the light microscope.

6               The transmission electron microscope is able to  
7 magnify up to 100,000 depending on the needs. So it's much  
8 more powerful, can resolve things much more readily and at a  
9 higher magnification, for lack of a better term.

10      Q       Is the TEM analysis able to differentiate between the  
11 particular chemicals or elemental makeups of the particles?

12      A       Yes. That is shown to the right. There is a capability  
13 where there is a -- this is what's called EDS or electron  
14 diffraction spectroscopy.

15              And the -- essentially there's an electron beam  
16 that's shot down into a target, and then the elements that  
17 make up the target scatter x-rays and other types of energy in  
18 a certain pattern as picked up by a detector. And that's  
19 shown on the graph here.

20      Q       Okay. So tell us what the general results of the PLM  
21 and the TEM analysis from R.J. Lee were.

22      A       The light microscopy of the 20 samples, they found --  
23 they didn't see anything by light microscopy that was  
24 aciniform. That is to say what we see here, kind of this  
25 grape-like structure in the chain, which is characteristic of

1 soot and char -- or soot and carbon black, they didn't see any  
2 of that by light microscopy.

3 Under the TEM, they did see some semblance of that  
4 as we see here.

5 But of those 20 samples, none of those fit the  
6 definition of soot as defined in the current standard, the  
7 6602, which is an ASTM international standard.

8 Q So why not?

9 A Because of the way -- the shape of the individual  
10 particles. Even though they are somewhat grape-like, you can  
11 see that they -- they're not real distinct. The connection is  
12 also -- the way that they attach to each other and the  
13 difference in size is also a way that they differentiate or  
14 they assess whether it really fits the classic definition of  
15 soot as defined -- or aciniform soot as defined in the 6602.

16 Q Okay. And in addition to the PLM analysis and the TEM  
17 analysis, you did one other level of analysis also, correct?

18 A Yes, we did.

19 Q What's that called?

20 A Well, on the -- we had a -- what's called a fractal  
21 analysis on the TEM images, which basically is a way of  
22 looking at the texture of each one of these individual  
23 particles, and that is -- that is called a fractal index. And  
24 what that does, that's a technique well-known in air pollution  
25 science. But it basically is characteristic of the type and

1 the fuel source of that particular particle that they see.

2 Q What are you looking at? Are you looking at -- what  
3 about the particle are you looking and comparing?

4 A The -- we're looking at basically the surface structure  
5 relative to the total volume of the particle, and that's done  
6 through a very complicated computer analysis program.

7 MR. ELY: Can we go to page 134.

8 Q (BY MR. ELY) Is this what you're talking about of a  
9 fractal analysis?

10 A The fractal analysis is actually a number that comes  
11 out, but this is the image that is used to generate that  
12 fractal analysis.

13 Q Okay.

14 MR. ELY: Can you go to page 7.

15 Q (BY MR. ELY) So tell me what I'm looking at here,  
16 Mr. Spicer, in terms of this fractal dimensions table. It  
17 looks like you have it divided between phase 5 and phases 1  
18 through 4.

19 MR. ELY: Chris, if you can take the next page and  
20 split it.

21 Q (BY MR. ELY) Tell me what I'm looking at with this  
22 table.

23 A The table is a summary of the fractal dimension data  
24 that was collected. And the samples, 15 through 20, which are  
25 the top half of the table, represent fractal dimensions

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1 generated from data in phase 5. And then -- correct.

2 And then the remainder of the table are the fractal  
3 dimensions generated from the samples collected throughout  
4 phases 1 through 4. Phase 5 and phases 1 through 4 were set  
5 up as basically two comparators. 1 and 4 were combined. So  
6 we compared the fractal dimension of the particles in phase 5  
7 or picked up in phase 5 versus the fractal dimension of the  
8 particles in phases 1 through 4.

9 What I do want to -- I want to go back a little bit  
10 to the TEM analysis from R.J. Lee. Their light microscopy did  
11 not find any -- as I said, any classic aciniform. That would  
12 be this grape-like structure that's used for -- as a  
13 characteristic of soot. However, they did in the TEM. They  
14 did find aciniform particles that were suggestive of other  
15 combustion sources.

16 When I say "other combustion sources," the classic  
17 definition in D6602 is predominantly carbon and maybe a little  
18 bit of oxygen. That's the way that standard is set up to look  
19 for carbon black and soot.

20 In this particular -- there were combustion-related  
21 particles that were found. So what we -- again, by doing  
22 this, we were able to do a comparison between those aciniform  
23 combustion particulates suggested from the TEM analysis in  
24 comparison by the fractal dimensions.

25 Q Okay. So -- why are you comparing phase 5 to 1 through  
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1 4?

2 A Based on the sampling plan, I went in with the  
3 assumption that phase 5 would be -- because that was closest  
4 to the building that burned, phase 5 in my mind likely would  
5 be -- if it showed anything related to impact from the fire,  
6 would be the most likely to show that; and, therefore, I set  
7 up phase 5 as a comparison against which to look at the other  
8 phases 1 through 4.

9 Q What did you determine?

10 A There is a significant difference. The aciniform  
11 particulates, the combustion particulates are not basically --  
12 as we say, statistically not from the same population. They  
13 appear to be from this, from two different sources.

14 Q What conclusion were you able to draw from that?

15 A Well, again, that's -- that is another bit of  
16 information in this whole process between visual inspection  
17 and all the other testing and all the other things we do that  
18 strongly indicate that there was not a source from 5 that went  
19 over into the other areas of the building.

20 Q Okay. So based upon your education, experience of over  
21 40 years in practicing industrial hygiene, based upon your  
22 review of the site, sampling, and the test interpretation  
23 results, interpretation you've done, are you able to say to a  
24 reasonable degree of scientific certainty whether you were  
25 able to find evidence of aciniform soot or char from the phase

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1 6 fire in the other areas of the Metropolitan?

2 A I came to a reasonable scientific conclusion that there  
3 was not impact from the fire area 5 over to the doughnut  
4 portion of the building.

5 Q And overall, was there any impact across the  
6 Metropolitan that you were able to find from the phase 6 fire?

7 A No.

8 MR. ELY: Thank you, Mr. Spicer.

9 MR. ABRAMS: May I, Your Honor, or are you --

10 THE COURT: I'll let you know when I'm ready.

11 CROSS-EXAMINATION BY MR. ABRAMS:

12 Q Good afternoon, Mr. Spicer.

13 A Good afternoon.

14 Q You mentioned -- we were talking about your  
15 qualifications, your background. You mentioned your work at  
16 IIRIC, correct?

17 A It's IICRC, but that's okay. It happens all the time.

18 Q I can never get it right. IICRC.

19 And one of your colleagues on the committee that you  
20 were working on is Mr. Dan Baxter, correct?

21 A Correct.

22 Q And you consult with Mr. Baxter on a regular basis,  
23 correct?

24 A With -- in regards to that committee, absolutely.

25 Q Yeah. And you have respect for Mr. Baxter's background

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1 and qualifications?

2 A I do.

3 Q Okay. So you first visited the Metropolitan on June  
4 13th, 2019, correct?

5 A Correct.

6 Q And when you visited, the HVAC was working, air  
7 conditioning on?

8 A At the time, the HVAC is -- the HVAC -- that's the air  
9 conditioning. I'm sorry. Heating, ventilation, and air  
10 conditioning was on in some of the units. My recollection was  
11 that the HVAC that I was looking at were the individual units  
12 in -- that service the individual apartment units that I  
13 looked at, my recollection was some of those were on and some  
14 of those were not.

15 Q Okay. And you understand that between the time of the  
16 fire and the time that you went to -- had your first visit,  
17 there had been some repair and painting and such of the  
18 Metropolitan, correct?

19 A There was, as indicated in the FBS report and as well as  
20 when I was there, there was ongoing construction activity as  
21 well.

22 Q Okay. And you generated a report -- it's actually -- it  
23 looks like the same report, but there's like three little  
24 word -- it's not very consequential.

25 You generated a report on July 31st, 2019, for  
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1 Travelers and another one on August 2nd; is that right?

2 A I would have to see that.

3 Q I'm going to hand you -- I'm going to put in front of  
4 you the reports that I'm going to ask you about.

5 A Okay. Yes. Apparently, yes. There was two reports  
6 within a few days.

7 Q And just so the record's clear, there is a report on  
8 July 31st, 2019, that's Plaintiff's Exhibit 237, and one on  
9 August 2nd, 2019, Plaintiff's Exhibit 24, correct?

10 A Yes.

11 Q Okay. And, again, they're almost identical. There's I  
12 think just -- do you remember there was a change of just a  
13 couple of words? I'm not suggesting they're consequential at  
14 all, but do you remember that?

15 A I don't specifically, but it doesn't surprise me, you  
16 know, that it may have happened.

17 Q Okay. And this report, I know counsel mentioned the  
18 word "preliminary." I know you did another report, but this  
19 is -- what's here, let's just use Plaintiff's Exhibit 24, the  
20 later one, August 2nd, 2019. It does indicate it's a  
21 preliminary report, correct?

22 A No. You know, I could do a word search, but I don't see  
23 the word "preliminary."

24 Q It's not a draft, correct?

25 A I don't believe so.

1 Q Okay. You actually -- my point is you actually sent  
2 this to Travelers, correct?

3 A I believe so.

4 Q All right. And you believe that you would have sent  
5 this to Travelers on or about August 2nd, 2019?

6 A I believe so, sure.

7 Q Okay. And in that report, you reach some conclusions.  
8 And essentially if I could distill it down, you concluded that  
9 there was no analytical support for fire residual  
10 contamination at the Metropolitan in phases 1 through 4,  
11 correct?

12 A That would be -- I believe if you -- right now without  
13 looking at it specifically, I believe that was based on the  
14 review of the FBS report, and I questioned the analytical  
15 protocols in that. And, therefore, because of those  
16 questions, I said the analytical support is not strong. I  
17 think that's what I said.

18 Q Okay. And that was based upon your visit to the  
19 Metropolitan in June, correct?

20 A That conclusion would have been based upon my assessment  
21 of the FBS report and certainly reinforced by my inspection.

22 Q Okay.

23 A Or my inspection was consistent with that.

24 Q And you did not believe, as part of your conclusion in  
25 your written report on August 2nd, that there was support for

1 FBS's conclusions calling for extensive interior demolition  
2 and cleaning of the Metropolitan, correct?

3 A I'm sorry. Could you repeat that?

4 Q Yeah. Your conclusion in your August 2nd report to  
5 Travelers was, is you didn't think that there was support in  
6 FBS's conclusions that were calling for an extensive interior  
7 demolition and cleaning at the Metropolitan, correct?

8 A Correct.

9 Q Now, I want to ask you about a few other things in your  
10 report. You state here, and I think you touched on it in your  
11 testimony on direct, is that due to the lack of standardized  
12 testing, there is no fixed numerical concentration of soot or  
13 char that can consistently be described as denoting  
14 contamination or damage, correct?

15 A That's correct.

16 Q In other words, if you were to define damage, different  
17 people have different views of what damage is, correct?

18 A Well, and that is -- I was making, I believe, a specific  
19 reference to laboratory data which can be easily taken out of  
20 context. That's why I made that statement. The fact that,  
21 you know, a 5-percent char or 5-percent soot with some  
22 individuals might be considered problematic, and other people  
23 it would -- it may not be, and it's -- there's no standard for  
24 that. So damage is -- in this realm is very difficult to  
25 attach to a specific analytical value.

1 Q So there are no fixed numerical concentrations of soot  
2 or char that there is uniform agreement as to what constitutes  
3 damage?

4 A Right. In any given circumstance, that's correct.

5 Q And, likewise, by extension, there are no health-based  
6 standards or exposure limits to the levels of soot or char for  
7 fire residual on surfaces, correct?

8 A Certainly. And when we talk about exposure, now we're  
9 slipping into a whole other area because --

10 Q Mr. Spicer, I'm reading directly from your report. Do  
11 you agree that by extension, there are no health-based  
12 standards or exposure limits, i.e. levels of soot and char for  
13 fire residual --

14 A Correct. In that context, correct. I apologize.

15 Q And you agree that fire residuals can contain a wide  
16 range of organic compounds and inorganic compounds, some of  
17 which are carcinogens, correct?

18 A Certainly.

19 Q And carcinogens are materials that can cause cancer in  
20 humans, correct?

21 A That is correct.

22 Q Okay. And exposure to humans can be through -- of these  
23 carcinogens can be through inhalation of dust, absorption  
24 through the skin, and/or inadvertent ingestion or resulting  
25 from inadequate washing after a contact with these

1 contaminated surfaces, correct?

2 A That is correct.

3 Q That's why when you have personnel that are exposed to  
4 certain surfaces or in the air, you know, you wear coveralls  
5 and gloves and respirators and such?

6 A I think I explained that. And, therefore, particularly  
7 for the remediation, people who are doing direct contact  
8 with -- who are cleaning up restores who are -- have obvious  
9 contact with material that's blackened or charred in that  
10 circumstance, that's correct.

11 Q So just to get our timing again correct, you visit in  
12 June 13th, 2019; you write a report and send it to Travelers  
13 on August 2nd, 2019; and then you come back and do testing, do  
14 sampling for testing on September 30th, 2019, correct?

15 A That timeframe seems correct, yes.

16 Q Is -- was there any reason for the delay between your  
17 report in August -- well, your first visit in June of 2019 and  
18 then not sampling until September 30th, 2019? Do you remember  
19 why there was that time difference?

20 A I can remember one of the reasons why.

21 Q Yes?

22 A Because my first advice to Travelers was there is no  
23 need to do any testing for this, and I spent considerable  
24 amount of time explaining to them what I had done in a very  
25 brief format here today with regards to the limitations and

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1 the ease by which generating a lot of data can oftentimes  
2 result in confusion and lack of clarity.

3           So before I -- in that whole process of discussing  
4 this with Travelers, I made a point of explaining to them what  
5 the advantages and disadvantages were. That took some period  
6 of time.

7       Q     So you had -- so it sounds like there was -- again, June  
8 13th, you go and do your initial investigation, you write your  
9 report. That gets done. Six weeks later, August 2nd, 2019.  
10 And then you have a series of discussions with Travelers about  
11 whether to do additional testing, which ultimately results in  
12 your visit on September 30th, 2019, correct?

13       A     Correct.

14       Q     All right. So let's talk about Birmingham, and you --  
15 your report doesn't cite any source of information about what  
16 background levels of soot and char are for Birmingham,  
17 Alabama, correct? Or in this particular part of the city,  
18 correct? I didn't see it.

19       A     That's because there's no specific references. They  
20 give a metric for that, as I indicated before. The whole  
21 field of even assigning a metric or, for lack of a better  
22 term, number that people can kind of grasp is the question of  
23 how that's done is not standardized out there. Or we can say  
24 that, and I think I put references in there, that Birmingham  
25 is known to be at least in the air pollution field to have

1 generated a fair amount of airborne particulate from  
2 combustion sources.

3 Q And that's because historically Birmingham in the past  
4 was a steel manufacturing city, correct?

5 A And it still is today with regards to -- I believe there  
6 have been -- I believe it's on the list of -- generated by the  
7 EPA with regards to pollution from particulates. I think I  
8 referenced that in there.

9 Q But that's not in your report, is it? It's in front of  
10 you.

11 A Okay.

12 Q Both of them are. Well, all three of them are.

13 A I know one of my reports has it. It may not be this  
14 one, but I do recall a --

15 Q Well, you -- I'm sorry. I didn't mean to cut you off.

16 Mr. Spicer, just to be clear, I think you say it,  
17 but you don't cite any source of information regarding the  
18 background levels of soot and char in Birmingham, correct?

19 A I don't necessarily agree with that. I believe that I  
20 had.

21 Well, I'll agree to disagree on that at this point  
22 so we can move on, but I usually --

23 Q If you can locate it, that's fine.

24 A Thank you.

25 Q What we can agree on is you didn't perform any testing

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1 or background levels in the city of Birmingham during your  
2 investigation, correct?

3 A Certainly not.

4 Q Okay. All right. You mentioned that you took -- when  
5 you got there for your next visit on September 30th, 2019, you  
6 took some samples. You said you took samples from 20 places,  
7 right?

8 A Correct.

9 Q And you mentioned that part of the reason why you took  
10 20 samples were budgetary concerns? You mentioned budgetary.

11 A I mean, I wanted to -- it wasn't a constraint, but I  
12 certainly -- as I said, I didn't want to propose something  
13 like 50 samples that would take two weeks to complete.

14 Again, in any situation such as this, one of the  
15 first things that, you know, we like to consider is, okay, how  
16 much sampling am I going to conduct, and what are the  
17 locations that would be -- give me the most information.

18 So, you know, that comes into play. You figure out  
19 how many samples.

20 Q Right. So you -- but one of your concerns was  
21 budgetary. I'm trying to get an understanding. Is it the  
22 cost of your folks' time in taking the samples, or is it the  
23 cost -- the budgetary concern, the cost of the lab analyzing  
24 the sample or both?

25 A It would be both, and I -- to be quite honest with you,  
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1 when I had this first discussion with Travelers, I was a  
2 little embarrassed because it was going to be a little higher  
3 than I had hoped it was. It turned out to be a fair amount of  
4 money.

5 Q To do the 20 samples, when you say a fair amount of  
6 money, can you give us an idea of what we're talking about?

7 A The total project cost to my recollection -- to answer  
8 your question previously about this, you know, it involves the  
9 laboratory analysis and the transport and the travel down to  
10 do it and the analytical -- the writing of the -- the report  
11 writing. Beginning to end, including the analysis, I believe  
12 the total project was around \$70,000.

13 Q Okay. But to take -- like if you added a sample, like  
14 is there an amount per sample that it would cost you? Can you  
15 get it down to that? Your 70,000 includes your first visit,  
16 correct?

17 A No.

18 Q This is just the second visit --

19 A Exactly.

20 Q Okay. And so do you have an idea of what it cost per  
21 sample to -- for your folks' time to take it and for the lab  
22 to charge you to analyze it?

23 A Well, I don't -- you could divide 20 into 70,000 and  
24 come up with a very, very crude unit cost, which includes  
25 travel and all of the things that generate the report. So I

1 guess you could do it that way, but --

2 Q Okay. So it would be somewhat less than that because  
3 you have certain fixed costs, correct?

4 A Sure, sure.

5 Q All right. The -- you chose -- if I'm correct, you  
6 chose the places to sample, correct?

7 A Well, I chose them, but they were not chosen randomly.  
8 They were generated by a report.

9 Q No, I understand that. I'm just asking if you chose the  
10 locations to sample.

11 A Yes.

12 Q Okay. And you knew at the time that you sampled on  
13 September 30th, 2019, you knew where FBS had sampled  
14 previously, correct?

15 A I had their previous report. I don't recall that I used  
16 their previous sampling as an influence on where I sampled.

17 Q Well, I know that. But I'm just -- I know that for a  
18 fact. But I'm just getting out the fact -- I just want to --  
19 I think you've just confirmed it -- is you chose to sample in  
20 different places than FBS sampled, correct?

21 A Yeah. My choice was driven on their hypothesis with  
22 regards to the pathway into the building.

23 Q And I'm correct that you did not sample behind or  
24 alongside wall outlets, electrical outlets, correct?

25 A Not immediately adjacent, correct.

1 Q Okay. And you didn't sample alongside switch plates,  
2 correct?

3 A Not immediately adjacent, no.

4 Q Or through recessed can lights, correct?

5 A I'm sorry. Could you repeat that?

6 Q Yeah. Through recessed can lights?

7 A Ceiling, like recessed ceiling?

8 Q Yeah.

9 A No, I don't recall we did.

10 Q Or through drop ceiling plenums?

11 A Correct.

12 Q Or you didn't sample elevator shafts, correct?

13 A Correct.

14 Q You didn't sample -- well, you didn't take any bulk  
15 samples of insulation, correct?

16 A That's correct.

17 Q All right. When you did take -- we've seen some photos  
18 of this. When you did take the samples behind the wall, it  
19 looks like you cut a 16-inch by 16-inch square into the gypsum  
20 board of the wall; is that right?

21 A I did not cut that. That was done by a facility  
22 representative who was there at that time, but at our  
23 direction, we said this seems to be a place where we would  
24 like this cut.

25 Q I didn't mean to say that you actually took out the saw

1 and did it, but you told the folks with the saw where to cut  
2 it?

3 A Correct.

4 Q And again -- let's look at slide 9.

5 THE COURT: Mr. Abrams, why don't we take a break  
6 here.

7 MR. ABRAMS: Okay.

8 THE COURT: We'll resume at 2:15. I'll ask the  
9 members of the jury, remember the admonition of the court. Do  
10 not discuss the case at this time or any time before  
11 submission of the case to you.

12 Thank you.

13 (A recess was taken.)

14 (The following proceedings were had in the presence  
15 of the jury:)

16 CROSS-EXAMINATION (continued) BY MR. ABRAMS:

17 Q Mr. Spicer, switching subjects, there's been talk about  
18 ASTM, the ASTM standard, standard 6602.

19 A That's correct.

20 Q You're familiar with that, correct?

21 A Yes, sir, I am.

22 Q And I just want to clear up a couple things. That  
23 standard is a standard that's used to identify carbon black,  
24 correct?

25 A It's designed for that purpose, that's correct.

1 Q All right. It's not designed to determine the  
2 deposition patterns of soot, correct?

3 A That's correct, yes.

4 Q Okay. In other words, there's nothing in the ASTM 6602  
5 standard where it says it should be used to identify soot from  
6 structural fires, correct?

7 A That's correct.

8 Q All right. Switching subjects, the -- let's talk about  
9 the methodology in wipe sampling. I'm correct, and I think  
10 you sort of alluded to this, that the science in this area is  
11 evolving, correct?

12 A To put it politely, yes, sir.

13 Q What do you mean by that? It's evolving at a radical  
14 degree?

15 A Correct.

16 Q Correct?

17 A Yes.

18 Q In other words -- and it's actually been evolving even  
19 since this work was done on the sampling that was done back in  
20 2019, correct?

21 A There are certain aspects of -- particularly the  
22 sampling analysis portion of it which are evolving, that's  
23 correct. The basic premise behind the evaluation based on  
24 visual inspection and understanding what went on and getting  
25 as much information as possible as the primary criterion by



1 which to judge -- that's still in place.

2 Q Okay. Understood. But, again, what one would have  
3 recommended doing back in 2019 as far as sampling may be  
4 different than one would recommend doing today, just three  
5 short years later?

6 A Well, as a general rule, that's true. I don't know if  
7 that's particularly in this particular situation, but I would  
8 say as a general rule, that's certainly possible.

9 Q Okay. And we'll get into the specifics.

10 So let's talk about wipe sampling. So it's my  
11 understanding what was done back in 2019 for wipe sampling or  
12 what you all did was you took a 4 by 4 inch of Texwipe fabric  
13 media that's premoistened with 70 percent isopropyl alcohol,  
14 correct?

15 A Correct. That's the way it comes from the laboratory,  
16 correct.

17 Q And then you sampled each location with a sticky tape,  
18 correct?

19 A Correct.

20 MR. ABRAMS: In fact, can we throw up slide 121.

21 Q (BY MR. ABRAMS) Okay. So, Mr. Spicer, these are photos  
22 of your team's work in sampling. Can you just show on the  
23 left side, what are we seeing there?

24 A That's the Texwipe, 4 by 4 Texwipe. That's the trade  
25 name.

1 Q And then on the right?

2 A That is the SEM stub.

3 MR. ABRAMS: Okay. You can take that off.

4 Q (BY MR. ABRAMS) So once the samples were taken, they're  
5 sent to R.J. Lee, correct?

6 A Correct.

7 Q And just to have -- you don't do the tests at R.J. Lee,  
8 correct?

9 A No, that's correct.

10 Q Are you a microscopist?

11 A I am not.

12 Q You wouldn't be qualified to do the testing, are you?

13 A No, absolutely not.

14 Q And you didn't go to the lab to look at how they were  
15 doing it, correct?

16 A No, sir, I did not.

17 Q All right. So just a little bit more about the science  
18 of how wipe samples are analyzed. So this is a TEM analysis,  
19 correct, that we're talking about, right?

20 A That is correct.

21 Q Again, tell us what TEM is, just to refresh us.

22 A Transmission electron microscopy.

23 Q Okay. And so under a TEM analysis, the wipe samples  
24 have to be placed in 20 milliliters of filtered acetone,  
25 correct?

1 A There is a procedure that is used to manage the samples.

2 Q Right. That's what I'm going to go through here.

3 But that's what R.J. Lee did here, right?

4 A I would have to go back and look at that, but there is  
5 an extraction process that goes on.

6 Q Do you have Exhibit 238 in front of you?

7 A I do not. I have 237.

8 Q So you don't have to take my word for it, look at  
9 appendix 3, page 27.

10 A I'm sorry. Did you give me a page?

11 Q Yes, appendix 3, page 27. I think there's two copies  
12 there. Don't get confused.

13 A That was appendix C, you said?

14 Q Yeah. No. I'm sorry. Appendix 3.

15 A I apologize. I'm having some difficulty locating it.  
16 This is in the R.J. Lee section?

17 Q It should be, yeah. Appendix 3, page 27. If you  
18 need -- you want me to --

19 A Yes, sir. Please, if you would.

20 Q All right. Why don't we do this: I'm going to have  
21 someone else do it so we don't waste everybody's time. Then  
22 we'll come right back.

23 Okay. So, Mr. Spicer, you understand that typically  
24 the way labs do this, and we're going to look at the specific  
25 reference, is you put -- normally it's put into acetone,  
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1 correct?

2 A I don't -- I can't tell you exactly. I believe that's  
3 correct, yeah. I know there's some solvent that's involved.

4 Q Some solvent, okay. And then you have to create some  
5 particle suspension by agitating each sample for a number of  
6 minutes, correct?

7 A Correct.

8 Q And so it's -- you use sort of this ultrasonic bath to  
9 break up the aggregates and particles, correct?

10 A It's a sonication, what's called sonication.

11 Q So I'm correct?

12 A Yes. And it's used to dislodge the particles from the  
13 sample media.

14 Q And so by doing that, it changes and alters the particle  
15 size distribution, correct?

16 A Repeat that question.

17 Q Yeah. When you do this, when you do this ultrasonic  
18 bath and you shake it up for ten minutes, it changes or alters  
19 the particle size distribution?

20 A Well, it may, depending on what particles you're talking  
21 about. If it's agglomerated soot, maybe, maybe not.

22 Q Okay. But it's possible by doing that, it could alter  
23 agglomerate soot, correct?

24 A It may.

25 Q And that's one of the reasons why there's -- before we

1 go further, does that indicate the samples that were placed in  
2 the acetone?

3 A Yes, correct.

4 Q Okay. Forgot what I was asking you.

5 The reason that -- well, you said that it may  
6 disrupt the formation of soot when you go through this  
7 ultrasonic bath and the agitation, correct?

8 A Correct.

9 Q That's one of the reasons that wipe sampling has become  
10 disfavored for this type of analysis, correct?

11 A No.

12 Q It's not one of the reasons?

13 A No.

14 Q Okay.

15 A But this -- we were not doing a standard post-fire  
16 analysis. This was a -- we were doing a -- testing a specific  
17 hypothesis, location, alleged location of smoke and soot. So  
18 the TEM is applicable for this particular application. It's  
19 not -- as I indicated before, this is a specialty type of  
20 exercise. It was not a standard soot, char, and ash  
21 evaluation.

22 Q So a standard soot, char evaluation is trying to  
23 determine amount and source of soot, correct?

24 A That is -- that is done by -- there's a couple of  
25 factors involved with that. There are three things that are

1 being looked at. One is obviously location. It's done with  
2 tape sampling generally --

3 Q To interrupt you, my question is when you said a  
4 standard, when you're doing a standard review, isn't the  
5 purpose of a standard review or what you're trying to get at  
6 is amount of soot and char and source; is that right?

7 A The source is deduced. It's not a direct indication.  
8 You have to deduce that from the indication you get from the  
9 sampling analysis.

10 Q And what I mean by "source" is whether it came from a  
11 structure fire or not from a structure fire?

12 A There are -- yeah, there are clues with regards to  
13 source, whether it's a structure. That's correct. What the  
14 source was, that's correct.

15 Q Okay. And that's what you call standard, right? Those  
16 are a standard testing protocol?

17 A The standard testing protocol is one, tape sampling,  
18 light microscopy. And by that, there is the -- as you had  
19 indicated, trying to get some clues as to the sort based on  
20 the depositional pattern in the sample.

21 Q Okay. Completely agree.

22 So -- and that is the standard of the science now;  
23 that if you were trying to determine whether it comes from a  
24 structure fire and amounts, you use the combination of -- the  
25 best method, as far as you're concerned and what the standards

1 are in science, is tape sampling versus light microscopy,  
2 correct?

3 A For that particular purpose, that's correct.

4 Q Okay. Because -- and the reason for that is because  
5 wipe sampling and TEM analysis aren't the ideal method to  
6 determine the difference between background soot infiltration  
7 and the soot condensation patterns that are normally  
8 associated with a fire event such as what happened in the  
9 Metropolitan?

10 A Not necessarily. If we're looking -- we used -- in this  
11 particular case, we used the TEM to get a better indication of  
12 the type of particles that were present and then to do an  
13 analysis of the surface characteristics by which to determine  
14 sources in that case.

15 In our particular case, we identified, for example,  
16 the sources by the fractal analysis were characteristic of  
17 diesel soot. I think that's pointed out in my report. So it  
18 depends on what purpose we're talking; what the context and  
19 the purpose of the particular investigation is.

20 Q But if the context of the investigation was to determine  
21 whether the soot and char was present from a structure fire,  
22 the best method to do that is tape analysis using light  
23 microscopy, correct?

24 A Please repeat that.

25 Q Yeah. If the goal of your testing is to determine  
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1 whether the soot or char came from a structure fire, the best  
2 way to do that is from -- is light microscopy using tape  
3 samples, correct?

4 A For a general building assessment, depending on what  
5 you're looking for, the light microscopy tape sampling gives  
6 you the most information, biggest bang for your buck, so to  
7 speak, for what you're doing.

8 Q Right. When I say what you're looking for, you're  
9 looking for whether there's the presence of soot and char from  
10 a structure fire? And in that case, the best method would be  
11 to use tape sampling using light microscopy, correct? That's  
12 the standard in the industry right now, correct?

13 A Within the context of the general building assessment,  
14 yes.

15 Q Okay. Just to give us an understanding of like the  
16 magnitude of what we're looking at here, the -- and I know  
17 you're not a microscopist; so if you don't know this, let me  
18 know and I'll move on.

19 Do you understand or can you describe the maximum  
20 size of the particle that can be analyzed in a TEM?

21 A The maximum size?

22 Q Yeah.

23 A Not off the top of my head. We're talking about micron.  
24 So we're talking about a thousandth of a millimeter or one  
25 25-thousandth of an inch. We're talking about very small.



1 Q Super, super small. In other words, like if I were to  
2 think of your wipe sample, is it fair to say that what the  
3 microscopist is looking at is one 300-thousandth of that wipe  
4 sample?

5 A Right. He's looking at a small section of it.

6 Q Right. That's what I'm talking about.

7 A Yeah. He's looking at a very small section of the  
8 sample, that's correct.

9 Q Okay. All right. A little bit more about this because,  
10 again, we talked about ASTM, and the purpose is to look for  
11 carbon black.

12 Carbon black, am I correct, is manufactured at more  
13 than 2,400 degrees Fahrenheit?

14 A Carbon black is a -- I don't know the exact temperature,  
15 but it's -- it's a controlled material. It's an industrial  
16 material that is generated for various commercial purposes.  
17 So it has a really specific temperature, and it ends up being  
18 produced with very specific surface characteristics and size  
19 characteristics and agglomeration or chain connections that  
20 all can be evaluated in the TEM. That's why the TEM is used.

21 Q So -- but -- okay. I know you may not know exactly the  
22 temperature the carbon black is manufactured. Fair enough.

23 But you know that carbon black is manufactured at a  
24 higher degree than soot is generated?

25 A I don't know exactly, but it doesn't surprise me. I'll  
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1 take your word for that. I don't know the exact differential.

2 Q Do you know the temperature in which a TEM electron beam  
3 is used to collect the image of a sample?

4 A Hot, hot is all I can tell you.

5 Q I'm going to start with the microscopist questions.

6 All right. Just quickly on the R.J. Lee -- I want  
7 to do this quickly.

8 On the R.J. Lee results, even doing the wipe samples  
9 and the TEM, they found aciniform -- they did find aciniform  
10 material, correct?

11 A Correct.

12 Q And --

13 A In 16 of 20 samples.

14 Q You knew the question I was going to ask you. They  
15 found it in 16 -- perfect. You're saving time. They found it  
16 in 16 of the 20 samples.

17 Let's switch subjects. One of the things that you  
18 noted in the fractal analysis and as part of your report, that  
19 they saw the presence of calcium, right?

20 A Correct.

21 Q Okay. And you have some opinions about that. But  
22 you'll agree that calcium is also an element in gypsum board  
23 and Sheetrock dust, correct?

24 A Correct.

25 Q And the gypsum board is -- when you had to cut open, you  
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1 asked someone else to cut it open in order to take your test,  
2 correct?

3 A Correct.

4 Q Your samples?

5 A Correct.

6 MR. ABRAMS: Can you throw up real quick 117, 118  
7 that we did before.

8 Q (BY MR. ABRAMS) While we're getting that ready,  
9 Mr. Spicer, you agree that calcium is also found in PVC pipe?

10 A That what is?

11 Q Calcium.

12 A That one I don't know. PVC is primarily -- chlorine is  
13 one of the ones we look for as a result of combustion of PVC  
14 pipe.

15 Q You don't know if calcium is in it?

16 A I don't know.

17 Q Electrical wiring?

18 A Electrical wiring, a lot of times there's hydrocarbons  
19 and chlorine, but, again, it's a PVC covering.

20 Q Vinyl windows?

21 A It would be the same.

22 Q Hardie board's got calcium in it?

23 A That I would expect.

24 Q Okay. And this is a picture -- to the right, this is a  
25 picture of your sampling, correct?

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1 A At this location, that's correct.

2 Q Right.

3 A Appears to be.

4 Q It's not every sample. It's just a picture of one  
5 sample?

6 A Right.

7 Q Go to the next one.

8 Same thing, a picture of what you're sampling?

9 A Correct.

10 Q We also talked where you mentioned about the fractal  
11 analysis?

12 A Yes.

13 Q Okay. And that found presence of calcium also, correct?

14 A No. Fractal analysis is an evaluation of the surface  
15 characteristics of the aciniform carbon particles. It has  
16 nothing to do with calcium.

17 Q I'm sorry. I got confused. All right.

18 But the fractal analysis, the same thing -- you're  
19 using the same wipe sample material in order to look at it?

20 A Yes, of course.

21 Q So, in other words, it's gone through the agitation,  
22 it's gone through the heating and so on?

23 A Correct.

24 MR. ABRAMS: Thank you, Mr. Spicer.

25 REDIRECT EXAMINATION BY MR. ELY:

1 Q Chris, I believe you mentioned earlier that in your  
2 inspection of phase 1 through 4 building, you were looking in  
3 cabinets and you were looking in closets, correct?

4 A Yes.

5 Q Why specifically were you looking in there?

6 A Because, again, smoke -- I think we all from our own  
7 common experience understand that smoke is airborne, so it can  
8 get into these spaces. And since there's no ventilation, for  
9 example, within a closet, it may linger there and so it will  
10 settle. You may get odors as a result. Again, that's a  
11 typical place that one would look in an inspection of this  
12 nature.

13 Q And like cabinets, no HVAC vent in a cabinet?

14 A I'm sorry?

15 Q No HVAC vent in a cabinet?

16 A No.

17 Q Last question. With respect to your sampling that you  
18 did on September the 30th of 2019, had you been provided  
19 reports, sampling reports from EMSL or MicroVision prior to  
20 those -- prior to your trip to the Metropolitan?

21 A I'm trying to -- you know, it's been four years. I've  
22 seen those reports. I can't remember exactly if I saw them  
23 before or after as I sit here today.

24 Q And additional reports, is that something that would be  
25 helpful in your analysis -- would have been helpful in your

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1 analysis in September?

2 A Sure. It would have factored into my whole assessment,  
3 sure.

4 MR. ELY: That's all I have. Thank you.

5 MR. ABRAMS: No further questions, Your Honor.

6 THE COURT: Thank you. You may step down.

7 MR. ELY: Your Honor, defendant calls Stephen Brian.

8 STEPHEN BRYAN, being duly sworn by the courtroom deputy,  
9 testified:

10 DIRECT EXAMINATION BY MR. ELY:

11 Q Can you state your name for the record, please.

12 A Stephen Bryan.

13 Q Mr. Bryan, where do you live?

14 A Redding, Pennsylvania.

15 Q Where are you currently employed?

16 A Travelers Insurance.

17 Q What is your job at Travelers?

18 A I'm an executive general adjustor. I oversee, in our  
19 commercial lines major case unit. So I oversee five general  
20 adjustors that handle the major case commercial claims that  
21 come into Travelers.

22 Q Okay. You mentioned the major case unit. You're  
23 talking about commercial claims. I want to start with the  
24 major case unit. Tell me what major case unit -- explain that  
25 to us.

1 A So you have varying levels of claim. They start from a  
2 couple hundred dollars up to multimillion dollar claims. So  
3 major case is -- starts -- at the time of this loss, it  
4 started around \$100,000 that claims above that amount would  
5 get referred to major case because those are adjustors that  
6 have more experience. And now the threshold for major case is  
7 roughly \$250,000 --

8 Q Okay.

9 A -- and above.

10 Q And so you've been an executive general adjustor in the  
11 major case unit for how long?

12 A Roughly seven years.

13 Q Okay. So it takes us back to around 2016. So for 2016,  
14 you've -- you've managed around five general adjustors. Does  
15 that number vary from time to time?

16 A No. It's been five consistently in my seven years.

17 Q Okay. Before you became an executive general adjustor,  
18 what did you do at Travelers?

19 A I was a general adjustor for roughly five years prior to  
20 that.

21 Q So basically working in the same role as the folks you  
22 supervise?

23 A Yes.

24 Q And that was also in the major case unit?

25 A Yes.

1 Q And so you've been in the major case unit with Travelers  
2 for the last 12 years?

3 A Yes.

4 Q And the types of claims that come into the major case  
5 unit, are they commercial property claims?

6 A Yes. They're all commercial property. So they range  
7 from manufacturing to restaurants to apartment buildings, new  
8 construction, historical buildings; I mean, anything that's  
9 commercial.

10 Q Okay. And so in your role as an executive general  
11 adjustor, do you handle claims directly still?

12 A Yes, I do.

13 Q Okay. So let me back up.

14 Before you went into the major case unit, were you  
15 employed with Travelers?

16 A Yes. I graduated college in 2003 and started with  
17 Travelers that same year. So I've been with Travelers for 20  
18 years now.

19 Q Okay. So what did you do between 2003 and when you came  
20 into the major case unit?

21 A I've been in the property division the entire time  
22 handling property claims. So I started out handling -- as an  
23 outside claim rep, handling the smaller losses that you have  
24 at your house; you know, dishwasher leak, a house fire, damage  
25 to the roof from storms.

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1           Then I was promoted to a technical specialist that  
2 handled claims -- same type of claims, but \$25,000 and above.  
3 I was a property field trainer after that where I taught  
4 estimating to newer adjustors and did on-site training for our  
5 adjustors.

6           Then I was a unit manager where I handled anywhere  
7 between six to eight outside technical specialists. That was  
8 in the Virginia area about five years, and then I went into  
9 major case after that.

10       Q     Okay. I want to talk a little bit -- shift from your  
11 background into the policy itself.

12           MR. ELY: So can we pull up Defendant's Exhibit 1.  
13 Let's go to the second page, start with.

14       Q     (BY MR. ELY) So, Mr. Bryan, this is a page that  
15 identifies the name of insured, and it's got policy period.  
16 Who is the -- who was the named insured on the policy  
17 originally?

18       A     Bomasada Birmingham Nationwide LLC.

19       Q     Okay. What is the policy period?

20       A     It is from March 31st, 2018, until September 30th, 2018.

21       Q     So the policy ended three days after this fire?

22       A     Yes.

23       Q     And Maxus is not mentioned here as a named insured. But  
24 there's not an issue as to whether Maxus is insured under the  
25 policy, is there?

1       A       Not as we sit here today. But initially it was an issue  
2 that we had to resolve, you know, from the time we received  
3 the claim.

4       Q       Okay. At the time you received the claim, had anyone  
5 alerted Travelers to the fact that Maxus had purchased the  
6 property?

7       A       I believe it may have been notified to underwriting per  
8 the agent, but we had no indication prior to the fire that  
9 Maxus had bought the property. Once we got the claim, we were  
10 informed by Bomasada that Maxus had purchased the property on  
11 August 30th.

12      Q       Okay. So time of the fire, Maxus had been insured under  
13 the policy for about 28 days?

14      A       Yes.

15      Q       And that was one of the issues you all dealt with early  
16 in the claim and you ultimately resolved, and it's not an  
17 issue today and hasn't been an issue since?

18      A       Correct.

19      Q       So what kind of policy is this? I think we've heard the  
20 term -- I used the term "builders risk." Is this a builders  
21 risk policy?

22      A       Yes. This is a builders risk policy. It's something  
23 that companies purchase when they're building a structure.

24      Q       Okay. So it covers the property while it's under  
25 construction, correct?

1 A Yes.

2 Q And is the coverage limited to the construction that has  
3 taken place?

4 A Yes. The coverage has a limit of -- this policy  
5 specifically has a specific limit of \$35 million, but at the  
6 time -- we must determine what the level of completion is for  
7 the construction because that's what we would pay for when the  
8 loss occurred, is where they were at at the time of the loss.

9 Q Okay. So things that were to be done are not covered  
10 under the builders risk policy?

11 A No. Because those costs had not been incurred at that  
12 time yet.

13 Q So let's go to page 22, please, Section A1 on the left.  
14 So this -- tell us what this is.

15 A This is stating that we'll pay for direct physical loss  
16 or damage to covered property resulting from a covered cause  
17 of loss. Then it states then that the covered property is the  
18 property that they own and are liable for and for which the  
19 value is included in the estimated total project value shown  
20 on the declarations page, which is prior to this.

21 Q Okay.

22 MR. ELY: Can you zoom back out and put 23 on the  
23 split screen for me. Page 23.

24 Q (BY MR. ELY) So you mentioned the covered cause of loss  
25 in section 3 on the second page here?

1 A Yes.

2 Q Covered cause of loss means risks of direct physical  
3 loss unless the loss is excluded in section B, exclusions,  
4 correct?

5 A Yes.

6 Q So some people refer to this as an all-risk policy. Is  
7 that how you refer to it?

8 A Yes. It's -- loss is covered unless it's specifically  
9 excluded.

10 Q So with respect to that, in terms of an all-risk policy,  
11 the fact that it's called an all-risk policy, does that mean  
12 that there doesn't have to be a direct physical loss or damage  
13 to property?

14 A Well, sure, for -- so risk of direct physical loss means  
15 that there has to be damage that occurs within the active  
16 policy period, which we had a loss here within the active  
17 policy period.

18 Then you need direct physical damage due to that  
19 loss for there to trigger coverage.

20 Q Okay.

21 MR. ELY: Can we go to page 37, please, section 10,  
22 please.

23 Q (BY MR. ELY) You mentioned the policy period. We  
24 covered loss or damage commencing with the inception date of  
25 the policy period shown in the declarations and ending when

1 any one of the following first occur: Policy expires or is  
2 canceled.

3 So by virtue of that in this case, any damage that  
4 occurs to the Metropolitan after September the 30th of 2018  
5 when the policy expired is not covered under the policy?

6 MR. ABRAMS: Your Honor, can we approach?  
7 (Counsel approached the bench and the following proceedings  
8 were had:)

9 MR. ABRAMS: Your Honor, what I think is happening  
10 here is this witness is being elicited testimony as to the  
11 implication of what the policy means. That's for you to  
12 decide. And I think that's -- I think that's what's going on  
13 here.

14 If he's going to talk about what's proximate cause  
15 or not, that's subject to the motion that they filed on Monday  
16 and what we filed something else on.

17 MR. ELY: That's fine, Your Honor. I can move on.

18 (The proceedings returned to open court.)

19 MR. ELY: Can we go to page 18, please. Go to  
20 general conditions, section A.

21 Q (BY MR. ELY) Mr. Bryan, can you read this -- just read  
22 the general condition A1 through 4, if you would, please.

23 A Concealment, misrepresentation, or fraud. This coverage  
24 part is void in any case of fraud, intentional concealment, or  
25 misrepresentation of a material fact by you or any other

1 insured at any time concerning: This coverage part; the  
2 covered property; your interest in the covered property; or a  
3 claim under this coverage part.

4 Q Thank you.

5 MR. ELY: Can we go to page 17, please. Go to  
6 section 4 at the bottom, please.

7 Q (BY MR. ELY) Mr. Bryan, can you please read this  
8 provision?

9 A Take all reasonable steps to protect the covered  
10 property from further damage, and keep a record of your  
11 expenses necessary to protect the covered property for  
12 consideration in the settlement of the claim. This will not  
13 increase the limit of insurance. However, we will not pay for  
14 any subsequent loss or damage resulting from a cause of loss  
15 that is not a covered cause of loss.

16 Q Thank you.

17 So I want to shift gears now from the policy, and I  
18 want to talk about the payments that Travelers has made under  
19 the policy. But I want -- the first part of that is I want to  
20 talk about how Travelers makes its payments.

21 You've been here, and you've heard the testimony  
22 that Travelers did not provide any explanations for its  
23 payments, and I want to go through that with you.

24 MR. ELY: If we could go to Plaintiff's Exhibit 760,  
25 please, full screen.

1 Can you go to the next page, please.

2 Q (BY MR. ELY) Okay. Mr. Bryan, can you tell me what this  
3 is, Mr. Bryan?

4 A This is an email sent by the general adjustor handling  
5 claim, Greg Bynum, to Jason Johns and Stuart Fred on  
6 Wednesday, March 13th, informing them that a payment has been  
7 made, and it has the settlement letter attached, statement of  
8 loss attached, and the detailed repair estimate for phases 1  
9 through 5 that was completed in Xactimate.

10 Q Xactimate is a term that's been used before in this  
11 trial. Can you kind of tell all of us what Xactimate is and  
12 what it does?

13 A So Xactimate is an estimating software that's used by  
14 insurance companies and remediation companies and contractors  
15 across the world. They update their price list monthly; so  
16 they take information from -- that they have people that  
17 gather, and they update the prices monthly.

18 So this is an estimating system that a lot of people  
19 use that -- you know, it has pricing, labor rates up to date  
20 monthly.

21 Q So, Mr. Bryan, take a look at the date, Wednesday, March  
22 13th, 2019. Is this the first Xactimate payment that  
23 Travelers had made on the fire damage?

24 A Yes. Well, December 5th we advanced a million dollars.  
25 We didn't have all the information to complete our repair

1 estimate. That takes time. So we advanced a million dollars.

2 As we got the information in from the insured, we  
3 compiled our Xactimate estimate. And based on all the  
4 information we had to date as of March 13th, we produced an  
5 Xactimate estimate, and this would be the initial payment in  
6 excess of the initial million dollars paid based on the  
7 Xactimate.

8 Q And I want to back up to the initial advance, the  
9 million dollar advance. Tell me how -- was an explanation as  
10 to what that million dollars was for provided to Maxus and  
11 Bomasada?

12 A Yes. There was an on-site meeting on December 3rd in a  
13 conference room in the doughnut building that Maxus, Bomasada,  
14 attorneys were -- they were all present. We had our  
15 consultants there. Greg was there from Travelers.

16 From my understanding, the insured was requesting a  
17 \$5 million request. At that time they discussed it, and they  
18 determined that a million dollars would be sufficient at that  
19 time to do the initial cleanup, any emergency repairs so they  
20 could get going.

21 Q Okay. And so that was all explained at that meeting?

22 A Yes. From my understanding, yes.

23 Q Okay. We've already -- who is Greg Bynum?

24 A He's the general adjustor that works under me that  
25 handled this claim directly.



1 Q Okay. Who's Jason Johns?

2 A Jason Johns is the attorney that represented Bomasada.

3 Q And who is Stuart Fred?

4 A Stuart Fred is -- from my understanding, he's the  
5 president of Bomasada.

6 Q And at this point in time, was Bomasada acting as point  
7 on this claim for Maxus, based on your understanding?

8 A Yes. In the first part of the claim, we communicated  
9 directly with Bomasada and Jason Johns.

10 Q Okay.

11 MR. ELY: Can you go to the next page, please, and  
12 then -- yeah, blow that up for me.

13 Q (BY MR. ELY) So what's this document?

14 A So this is our statement of loss. This is where we  
15 summarize our amounts that we have verified or estimated. So  
16 this is clearly laying out that it says building repairs per  
17 Travelers' Xactimate estimate for phases 1 through 5. We  
18 estimated roughly \$580,000 in repairs, and then for -- per our  
19 Travelers' Xactimate estimate for phase 6, we estimated  
20 roughly \$2.9 million for repairs.

21 Q And so is the statement of loss, is this something that  
22 is provided with every payment?

23 A Yes. Every payment we provide a statement of loss. We  
24 provide a settlement letter. And whenever we generate an  
25 Xactimate repair estimate, we provide that as well.

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1 Q Okay.

2 MR. ELY: Can you go to the next page, please.

3 Q (BY MR. ELY) So the -- I'm not going to -- certainly not  
4 going to go through the Xactimate estimate, but I want to  
5 provide some sort of an example.

6 The Xactimate estimates in this case, every time a  
7 payment was made, a Xactimate estimate was provided showing  
8 the detail, correct?

9 A If it was related to an update in our Xactimate  
10 estimate, yes, we would have provided an Xactimate estimate.

11 Q So the level of detail provides -- is this an example of  
12 the level of detail provided in Xactimate estimate?

13 A Excuse me?

14 Q Is this an example of the level of detail provided  
15 through an Xactimate estimate?

16 A Yes. So it -- you know, this estimate, it will -- it  
17 starts on the first floor, or it starts on the top floor,  
18 depending on the preference of the consultant. Some start  
19 from the top down, bottom up. They'll go through each level.  
20 They'll list out every room. So in every room for the phase 5  
21 estimate, you'll see that it's affected. You'll see a line  
22 item that says what we're doing in each of those rooms.

23 So here we're thermal fogging and sealing the stud  
24 wall.

25 Q Okay. And this Xactimate estimate is an example of what

1 would have been provided on a room-by-room basis with any  
2 updated payments made by Travelers through this claim?

3 A Yes. This was provided with our initial March 15th  
4 payment.

5 Q So with respect throughout this claim, that's the  
6 documentation Travelers had provided?

7 A Yes.

8 Q Okay. Let's go to Defendant's 31, please.

9 That's all right. We'll come back to it.

10 So I want to shift gears, Mr. Bryan, and I want to  
11 talk about -- move through some of the aspects of the claim.  
12 I want to start with the first section of the claim. The loss  
13 occurred on September 27th, 2018.

14 Can you tell me what coverage issues -- what, if  
15 any, coverage issues arose almost immediately?

16 A Right. So the first thing we do when we get a loss in,  
17 we review the policy. So builders risk policy, we see them,  
18 but we don't see them as much as, you know, some of our other  
19 policies. So any policy we're going to review from front to  
20 back.

21 So here, like we pointed out earlier, this is an  
22 all-risk policy. We know you had a fire. It's a covered  
23 cause of loss, but we continue to go through the policy and we  
24 look. Well, on this policy, they had a protective safeguards  
25 endorsement.

1           What that endorsement entails is it says during the  
2 construction progress, you have to meet the requirements that  
3 are checked on this endorsement. And two of the requirements  
4 that were checked on that endorsement that directly related to  
5 a fire event was a security guard that monitored the loss site  
6 and also essentially monitored alarm -- an intruder alarm  
7 system.

8       Q     I apologize. I'm skipping around a little bit. Tell us  
9 what this is with regard to payments, what we're looking at as  
10 Defendant's Exhibit 31.

11       A     All right. So this is a statement of loss generated on  
12 October 29th, 2021. So this would have been one of our final  
13 payments prior to being here.

14           So this clearly lays out what we paid for for phases  
15 1 through 4 based on our Xactimate repair estimate. We paid  
16 \$37,000 and change. For phase 5, based on our Travelers'  
17 Xactimate estimate, we paid a little over one million dollars  
18 for phase 5.

19           For phase 6, based on our Xactimate estimate, we  
20 paid a little over 5 million.

21           Extra expenses, which we don't have the tab here,  
22 but we would have another tab down here that we had on the  
23 statement of loss that would summarize the extra expenses in  
24 the amount of \$39,000, which included lawyer invoices,  
25 invoices for the engineer inspections, for the hygienist

1 inspections.

2 So that -- and then we paid for a mobile mini  
3 container. If you remember in some of the pictures they were  
4 pointing out, there was a container on the east side of phase  
5 6 in that alley that was damaged. And then we also paid for  
6 damage found to the construction trailer.

7 Q Okay.

8 MR. ELY: Can you shift the page a little bit down,  
9 Chris.

10 Q (BY MR. ELY) We've got a second section down here for  
11 business interruption. Does that explain what's been paid for  
12 the lost rents?

13 A Right. So it states we've paid a little over \$415,000  
14 for rental income as calculated by Travelers, and we -- just  
15 like the schedules you saw from Ms. Pienta, we had an internal  
16 accountant in our claim accounting services department. Her  
17 name was Jackie Sasser. She prepared a schedule of the same  
18 nature that we shared with our insured when we issued the  
19 payments for the loss of rents.

20 Soft costs, which -- insurance premiums, it clearly  
21 states there. That's for a portion of insurance premium with  
22 the applicable 30-day waiting period applied. I know we  
23 talked about it briefly, but since it came up here, for the  
24 soft costs and loss of rental income piece, if the loss  
25 occurred on 9/27 and they immediately started incurring loss

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1 of rents, we wouldn't pay for those loss of rents until 30  
2 days expired.

3 Q Okay.

4 A And then the other ones were soft cost payments directly  
5 related to costs submitted by Bomasada. And then we paid  
6 claim data expenses which were for the costs that Maxus  
7 incurred for Michelle Pienta to prepare their loss-of-rents  
8 claim.

9 Q Okay. So from this statement of loss, can you tell us  
10 how much has been paid for -- to Maxus for building damage?

11 A Yes. \$6.1 million.

12 Q Okay. Is that that 6.1 -- is that 6,168,425.69 number?

13 A Yes.

14 Q With respect to the lost rents that's been paid to  
15 Maxus, that's not that total 865 because some of that went to  
16 Bomasada for soft costs. What's the figure for the Maxus --  
17 the amount that's been paid to Maxus for lost rents?

18 A 415,379.92.

19 MR. ELY: Chris, if you could pull Defendant's  
20 Exhibit 1 again. I believe it's page 70.

21 Q (BY MR. ELY) So before we talked about the statement of  
22 loss, we were talking about the protective safeguards  
23 endorsement. Is this what was in the policy at the time of  
24 loss, the protected safeguards endorsement that was in there  
25 at the time of loss?

1 A Yes.

2 Q Explain to us in simple terms how this works, what  
3 you're looking at.

4 A Okay. So this is -- it states protective safeguards.  
5 It pretty much says that these items have to be in place at  
6 the time of the loss for the applicable causes of loss, which  
7 are summarized right here.

8 So as you can see, this was a fire. So theft and  
9 vandalism, we determined wouldn't apply to this loss. It was  
10 fire.

11 So as it was a fire, this endorsement requires that  
12 a private security guard service is retained monitoring the  
13 loss site. And then also that there's essentially monitored  
14 electronic intruder alert system that's installed that helps  
15 prevent -- that could possibly help prevent the fire. So it  
16 says if a fire happens, both of these items have to be in  
17 place at the time of the loss.

18 Q So loss occurs September the 27th, 2018. Tell me  
19 when -- did you make a visit to the site after the loss?

20 A Yes. So once we got the claim, Greg called -- you know,  
21 I see when claims are assigned. So I try to reach out to my  
22 guys and help as much as possible. We review stuff together;  
23 so we were reviewing the policy.

24 We determined these protective safeguards. So we  
25 met on site on October 3rd in the construction trailer with

1 Bomasada. J.S. Held was there with us, our construction  
2 consultant that we retained prior to that meeting to help move  
3 the claim along as well. And the agent McGriff was there as  
4 well to meet with us.

5 Q And in that meeting, did the issue -- the questions  
6 about the protective safeguards that were in place at the time  
7 of the loss come up?

8 A Yes. Well, I don't know if they asked about it, but we  
9 wanted to make sure that they were aware of them because we  
10 knew that these were items that had to be in place at the time  
11 of the loss. So we wanted to make sure that they were aware  
12 of that.

13 So at that time we told them, Look, we're going to  
14 request information to verify that this stuff was in place.  
15 We informed them that while we investigate, we're going to  
16 issue a reservation of rights letter that's pretty much saying  
17 that we reserve our rights to deny or accept any part of this  
18 claim now or any time in the future until we complete our  
19 investigation.

20 So we discussed that, and they understood, and they  
21 were going to start working on getting us the information.

22 Q Did you make any request for information from Bomasada  
23 at that October the 3rd meeting?

24 A Yes. Unofficially we told them what we needed. We  
25 said, Look, if you had -- you had a security guard service in  
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1 place -- we later found out it was Signal 88 -- we need to  
2 make sure that they are in place.

3 And especially after Maxus bought the property, we  
4 wanted to ensure that that service continued from the time  
5 they purchased it until the time of the fire.

6 We told them we needed proof that a  
7 centrally-monitored intruder alert system was present as well.

8 Q Did you learn anything about the centrally-monitored  
9 intruder alert system at the time of the meeting?

10 A Yeah. The Bomasada representative, which was Doug  
11 Altenbern, he made the statement that there wasn't full power  
12 to the site. There was temporary power, and he was not aware  
13 that there was an alert system installed.

14 Q So given that information, did that raise a coverage  
15 issue potentially?

16 A Yes. I mean, this clearly states that these two items  
17 have to be in place at the time of loss, and they're both  
18 marked. So if they weren't, it could possibly affect coverage  
19 moving forward.

20 Q In addition to the coverage issue with regard to the  
21 protective safeguards endorsement that was raised at the  
22 October the 3rd meeting, did you talk to Bomasada about what  
23 information you needed to begin adjusting the physical loss of  
24 the claim?

25 A Yes. Like I said, J.S. Held was there. They're our  
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1 construction expert. So we hire them to help us move that  
2 portion of the claim along in a timely manner.

3 I mean, myself and my general adjustors, we have  
4 claim handling background. We have -- some of us have  
5 construction background, but that's not all we deal with. We  
6 deal with the whole range of the claim.

7 So we hire construction experts that have that  
8 expertise in that specific area. That's why we bring them  
9 out.

10 So during that meeting, J.S. Held was reviewing what  
11 plans were in the trailer with the Bomasada representative,  
12 and they were giving them a rough list of what we would need  
13 moving forward so we could ensure while our coverage  
14 investigation was ongoing that we're going to start getting  
15 all the information for -- to determine the state of the  
16 building, at what stage of completion it was in at the time of  
17 the loss.

18 So once we completed our coverage investigation, no  
19 matter what the outcome was, we were ready to move on to the  
20 next part of the loss if necessary.

21 Q Okay. So even though the coverage issue had been  
22 raised, did Travelers move the claim forward on the adjustment  
23 piece?

24 A Yes. We always move forward with the adjustment piece  
25 until a coverage -- until a coverage determination is made.

1 Q Okay. And do you know when J.S. Held first visited the  
2 site to evaluate the loss and begin the work on estimating the  
3 damage?

4 A Right. So when we were out on October 3rd, the scene  
5 was still being held by the ATF because we knew it was arson.  
6 It was reported as arson.

7 We did have a representative from Travelers that was  
8 out inside the buildings walking around. It was our cause and  
9 origin investigator. Because they are investigating the cause  
10 of loss and they kind of do that hand in hand with the local  
11 fire department and they were doing that with the ATF, they  
12 are allowed into phases 1 through 4, 5. They walked the  
13 entire site.

14 We were not allowed. So we walked the perimeter  
15 with J.S. Held. We got a lay of the damages. Phase 6 was on  
16 the ground. We had some obvious damages to phase 5.

17 So we informed Bomasada at that time, let us know  
18 when ATF clears the site. October 4th, ATF cleared the site  
19 to where J.S. Held -- we could inspect phase -- we could get  
20 into phase 5 and the other phases. So J.S. Held was out there  
21 on October 8th through the 10th.

22 Q Okay.

23 MR. ELY: Can we pull up Defendant's Exhibit 6,  
24 please.

25 Q (BY MR. ELY) This is a letter dated October the 5th,  
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1 2018. Can you kind of just generally tell us -- state what  
2 this is?

3 A This is a reservation of rights letter, as I informed  
4 you, we discussed during our meeting in the construction  
5 trailer on October 3rd. This just tells them, if you look at  
6 the second paragraph here, that we're investigating this loss  
7 for fire damage at the loss location subject to a complete  
8 reservation of all our rights under the policy, including the  
9 right to deny coverage for all or part of your loss should it  
10 be determined the policy does not afford coverage.

11 There's other language in that that as we complete  
12 our investigation, we're reserving our rights.

13 Q Take a --

14 MR. ELY: If you can blow up the first paragraph,  
15 please.

16 Q (BY MR. ELY) And here's where we're -- here's where  
17 there's mention -- we talked about the question about the sale  
18 of the property that was ultimately resolved -- no question  
19 about Maxus' status as an insured -- and the protective  
20 safeguard endorsement, correct?

21 A Correct.

22 Q So as of October the 5th, those are the two things from  
23 a coverage side that you all were trying to deal with?

24 A Yes. Those were the only two things that we saw as  
25 being an issue in regards to verifying coverage at that time,

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1 was Maxus bought the property on August 30th. Nowhere on the  
2 policy was Maxus' name. So we needed documentation to verify  
3 the sale of the property, the transaction, the details of  
4 that.

5 And then the second thing, as we went into a lot of  
6 detail already, was the protective safeguards that were  
7 requirements that were in place, which was the security guard  
8 and the alarm system.

9 Q Okay. So with respect to the adjustment of the building  
10 claim, were there requests for information that went to  
11 Bomasada around this same time?

12 A Yeah. Well, if you go to the second page of this, I  
13 believe there was -- there's a request for information there  
14 at the bottom that goes on to the second page. We lay out  
15 exactly what we need.

16 Again, this is just summarizing what we need for the  
17 sale of the property and to verify the protective safeguards  
18 were in place. And then also in follow-up to our meeting on  
19 October 3rd, our initial request for information was sent out  
20 on October 10th to our insured, and that was a much more  
21 extensive list of all the construction documents that we  
22 needed.

23 Q What are you needing the construction documents for?

24 A Well, they change sometimes from job to job, depending  
25 on the type of construction and that. But for this one, we

1 needed a construction contract, the subcontracts, the schedule  
2 for the project. We needed the pay apps. We needed the lien  
3 waivers. We needed photos. We needed daily logs. We needed  
4 inspection reports.

5 I mean, there's a lot that's kept on a job of this  
6 size that tracks the amount of work that is done day in, day  
7 out to support, you know, the amount of work that was done;  
8 and more importantly, that you submit to your finance company  
9 for them to release money as you move along in the progress.

10 Q So why were those documents important? What were  
11 they -- what were you trying to figure out from those  
12 documents?

13 A Those were going to help us determine what state -- what  
14 level of completion phase 6 was in. Because it was on the  
15 ground, there is no way we could tell.

16 Now, based on our initial inspection on October 3rd,  
17 we were informed that phase 5 and phase 6 were of similar  
18 completion status. So when we were able to get into phase 5,  
19 we made notes that -- of everything that was in phase 5  
20 because we were informed that phase 5 and phase 6 were pretty  
21 close in the amount of completion at that time.

22 So that's where we started, but we needed all this  
23 documentation to further verify the amount of work that was  
24 done on phase 6 prior to the loss.

25 Q So at some point, the issue of the protective safeguards  
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1 endorsement was resolved; was it not?

2 A Yes, it was.

3 Q Tell us how that happened.

4 A So we continued -- we got information from the insured  
5 through Jason Johns, Bomasada attorney. So we did eventually  
6 confirm in the beginning of August -- I mean, in the beginning  
7 of November that there was no centrally-monitored alert system  
8 installed.

9 We had verified that Security 88 was, in fact, in  
10 place, and they were monitoring the job in the off-site hours,  
11 you know, from the time it closes until the next morning.  
12 There was no centrally-monitored alert system.

13 Well, first I believe it was November 7th, an agent  
14 from McGriff reached out to underwriting and provided a letter  
15 from their -- from the last renewal that showed that the  
16 protective safeguards, they both didn't have to be in place.  
17 It was "or." It was the security guard or the  
18 centrally-monitored alert system.

19 Q Let me stop you right there. Who's McGriff?

20 A They're the broker for Bomasada.

21 Q Okay. So they were the company that Bomasada used to  
22 purchase the policy back in March?

23 A Correct.

24 Q Okay.

25 MR. ELY: So, Chris, if we could go to Exhibit 1,  
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1 pages 87, 88.

2 Q (BY MR. ELY) So Mr. Bryan, can you tell us what we're  
3 looking at here? Looks like it's an endorsement of the policy  
4 with the issue date of 12/6/18?

5 A Right. So this would say that -- so once we got that  
6 information, again, I'm not in underwriting, so I'm just  
7 telling you what they share with me. That they got the  
8 information, they reviewed it, verified that it was, in fact,  
9 something that was provided to Bomasada and their agent at the  
10 time of the last renewal. They took that information. They  
11 reformed the policy.

12 So part of the reformation is they updated this  
13 protective safeguards endorsement that was specifically  
14 affected by this, and they took off the checkmark on the alert  
15 system. So all they had to have in place at the time of fire  
16 for a loss caused by fire was the security guard service.

17 Q So this was an endorsement that was added to the policy  
18 in December of 2018 as a result of the -- the "or" information  
19 you had received from the agent?

20 A Right. This whole process started November 7th when it  
21 was received. It takes several weeks. So eventually when  
22 this reformation went through, it was put into effect on  
23 12/6/18.

24 MR. ELY: Can we pull up Plaintiff's Exhibit 259,  
25 please.



1 Q (BY MR. ELY) Okay. So letter dated November 29th, 2018.  
2 Can you tell us -- go ahead and read the letter, please.

3 A Dear Mr. Johns: This letter is in follow-up to a  
4 conversation you had with claim manager Stephen Bryan on  
5 Wednesday, November 28th, confirming Travelers' investigation  
6 has been completed and coverage is being provided for this  
7 loss.

8 This letter is to confirm coverage as being provided  
9 in full for this loss per the applicable policy conditions.  
10 We look forward to meeting with you and the insured on Monday,  
11 December 3rd, 2018, to begin working toward a resolution of  
12 this claim.

13 Q So I believe you mentioned November 7th as the date that  
14 you got the information about the protective safeguards  
15 endorsement, correct?

16 A Yes.

17 Q Okay. So can you explain what's gone on in the last  
18 basically three weeks, what took three weeks for this letter  
19 to go out to confirm coverage?

20 A Again, I'm not in underwriting, so I can't comment as  
21 to, you know, why things take a certain period of time. But  
22 we know that underwriting was supplied that information. They  
23 were reviewing it, and they were working on a reformation.

24 So we got word on -- it was either, you know,  
25 November 27th or 28th. I don't remember when I got it. As  
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1 soon as I got it, I reached out to Jason Johns because  
2 that's -- all communication was going through him at that  
3 time.

4 I know they were anxious to get a decision on the  
5 coverage and let him know that, hey, we sorted out the issues  
6 with the protective safeguards, and we're providing coverage  
7 for this loss.

8 Q Okay. So you've seen testimony about an Alabama  
9 Department of Insurance complaint that was filed right around  
10 this time.

11 A Yes.

12 Q Correct? Remember seeing that?

13 A Yes.

14 Q Did the Alabama Department of Insurance complaint have  
15 anything to do with this letter?

16 A No. We had already gotten the information on November  
17 7th from the insured, and we were already in the process of  
18 waiting for underwriting to complete the reformation so we  
19 could share with our insured that coverage was going to be  
20 provided.

21 Q You mentioned the word "reformation." What's that mean?

22 A That means they're going to reform the policy. So  
23 they're going to make a change to it; that the first  
24 protective safeguards endorsement had those two requirements  
25 on it, but based on information they received now, there's

1 only one requirement. So they're going to reform the policy  
2 to reflect that change.

3 Q And until that policy is reformed, are you in a position  
4 to communicate anything about the change in coverage?

5 A No. From my understanding, it goes through different  
6 levels of review and underwriting. We have to make sure that  
7 everyone on that side is in agreement. So until they come  
8 back to us and confirm that this change is being made, we  
9 can't make a coverage decision.

10 Q So I want to -- now that -- am I correct that both the  
11 coverage issues, the question of Maxus has been insured and  
12 the protective safeguard endorsement have both been resolved  
13 in Maxus' and Bomasada's favor, correct?

14 A Correct.

15 Q As of November the 29th, 2018.

16 So I want to shift gears into the actual movement on  
17 the claim.

18 What's the next thing that happened in the claim  
19 after November the 29th?

20 A So there was a site meeting in the doughnut building on  
21 Monday, December 3rd with Travelers. I was not there. Greg  
22 Bynum was there. J.S. Held was there. Bomasada and Maxus  
23 were both there with their attorneys.

24 Q What was discussed at the time? I think you mentioned  
25 the advance earlier. Was an advance discussed then?

1       A       Right. They discussed an advance on it now that we  
2       had -- we determined coverage was available, we could now  
3       issue some money to them. So, again, there was some  
4       discussion on the amount of advance. It eventually was landed  
5       on a million dollars would be sufficient to get them going.

6               They also discussed what was needed for the loss.  
7       So we had already sent out an RFI on October 10th, but that  
8       same RFI was provided as a hard copy at this meeting. So they  
9       discussed the level of completion and why we needed to  
10      determine that based on the applicable coverage per the  
11      builders risk policy.

12      Q       So just as a point of clarification, what is an RFI?

13      A       Oh, I apologize. It's a request for information.

14      Q       So October the 10th, we -- you had sent a request for  
15      information to Bomasada for construction documents, correct?

16      A       Yes. That was our initial request on October 10th.

17      Q       So we're fast forwarding to a meeting on December the  
18      3rd. Had Bomasada provided any construction documents in  
19      response to that request for information by December the 3rd?

20      A       Not to my knowledge, no.

21      Q       Okay. And were the outstanding requests for information  
22      discussed at the December 3rd meeting?

23      A       Yes. A copy of that request for information was  
24      physically provided to everyone in attendance. They discussed  
25      why it was necessary. From -- after that meeting in talking

1 to Greg, my understanding was that Stuart Fred of Bomasada  
2 wasn't in agreement that all that documentation was required.

3 Greg explained that per the policy and the coverage  
4 provided in this builders risk, we had to determine the level  
5 of completion of that -- of the construction to determine what  
6 was in there at the place of time. Since it burned down to  
7 the ground, we needed that information.

8 So explained that, and they discussed why everything  
9 was needed to -- for us to adjust the loss accurately.

10 Q Okay. And so did the question of environmental  
11 investigation come up at the meeting?

12 A Yes. From my understanding, Bomasada brought up that  
13 they wanted to bring out ATC, which is an environmental  
14 company, to test phase -- to test for combustion byproduct and  
15 water. They ultimately ended up testing phase 5, and they  
16 also wanted them to test debris of phase 6 to determine if  
17 there was any asbestos in it.

18 And they also wanted to bring out an engineer to  
19 test the slab of phase 6, the concrete, to determine if that  
20 had to be replaced as a result of the fire.

21 Q Who was the company ultimately that Bomasada had come  
22 out and do the testing in phase 5?

23 A ATC.

24 Q Okay. Do you know when that inspection occurred?

25 A It was mid December.

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1 Q Okay. And did someone from J.S. Held accompany ATC on  
2 the inspection?

3 A Yes. So it was agreed that ATC would do the testing.  
4 We were fine with that. Bomasada was retaining them. We said  
5 since we had J. S. Held involved, they had -- they're a big  
6 company. They have IHS, industrial hygienists, in their  
7 company.

8 So we said, Look, we're going to have them tag  
9 along, just review everything, work with ATC to make sure that  
10 everything is on board, everything is done correct so we make  
11 sure we all get the correct information moving forward.

12 Q Okay. Do you know when you got the ATC report?

13 A It was mid January, I think --

14 MR. ELY: Plaintiff's 244, let's pull that up.  
15 First page.

16 A So January 15th.

17 Q (BY MR. ELY) Okay. So we're now in January 15th, 2019.  
18 We've got an ATC report. What else is going on in the claim  
19 in terms of are you -- are estimates being prepared; is the  
20 loss being quantified; what's happening?

21 A Yes. J.S. Held was out there on October 8th to the  
22 10th. They did a complete takeoff of the damages on phase 5  
23 and some minor damages on the exterior of phase 4 that were  
24 identified. So they were working on the estimates, but there  
25 was only so much we could do until we started receiving the

1 requested information from Bomasada in regards to phase 6.

2 Q So we're here now on January 15th of 2019, six weeks  
3 later after the meeting in December. Had Bomasada provided  
4 any information in response to the October 10th request for  
5 information?

6 A I believe they supplied some documents here and there  
7 because we had sent out two additional RFI requests in  
8 January. And every time on that RFI request when we would  
9 update it, we would have a column of what we received and what  
10 we were still waiting on.

11 So I believe we sent out two additional copies in  
12 January updated. So we -- I believe we had received some  
13 information, but not near the amount that we needed to do a  
14 full evaluation of what level of completion phase 6 was in at  
15 the time.

16 Q Okay.

17 MR. ELY: Let's pull up Defendant's Exhibit 9.  
18 Let's go to the -- let's go to the first paragraph, please.

19 Q (BY MR. ELY) So we're at January the 29th of 2019 at  
20 this point. Based on -- strike that.

21 Was Travelers still waiting on documentation from  
22 Bomasada, construction documentation from Bomasada, to assist  
23 it with quantifying the loss?

24 A Yes.

25 Q Was this an ongoing problem from the very beginning

1 after the loss?

2 A Yes. Like I stated earlier, the counsel for Bomasada  
3 had some reservations about all of the documents we were  
4 requesting from the beginning, and this is an email received  
5 on January 29th, 2019, from Stuart Fred that's informing us  
6 that he's still -- they're still working on getting the  
7 documentation for us.

8 Q Okay.

9 MR. ELY: Let's go to the second paragraph, please.

10 Q (BY MR. ELY) So first sentence -- can you read the  
11 first -- I don't even really know if these are sentences.

12 As you know, one million dollar advancement was made  
13 towards repairs. That's the advance you were talking about  
14 on -- that was made in December, correct?

15 A Correct.

16 Q Now, this brings up a point. Can you explain to us what  
17 an advance is?

18 A So when we go out to a loss and, you know, we're  
19 handling large losses, whether it's from a quarter million  
20 to -- you know, I think, you know, some of the biggest are  
21 hundreds of millions. That's a lot of money for anyone.

22 So when we get out to a loss, we determine, all  
23 right, what's the potential here for the total size of loss,  
24 if -- you know, just looking at it roughly.

25 Then we talk to the insured. We determine what are  
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1 your immediate needs? So then that's when we determine an  
2 advance. So that advance payment puts funds into their bank  
3 so they can address the emergency repairs, any remediation  
4 that's needed. It could deal with payroll if that's -- you  
5 know, it could deal with a lot of different stuff.

6 Q Okay. In this particular email, Stuart Fred was with  
7 Bomasada, and Bomasada was conducting the demolition and  
8 cleanup, correct?

9 A Correct.

10 Q So second sentence: I previously confirmed with you and  
11 still am of the opinion we are good with this amount given  
12 where we are as to known damage attributed to the fire.

13 A Right. So he's saying, Look, you gave me a million  
14 dollars. I don't need any more money at this time.

15 Q Okay.

16 MR. ELY: Let's go to the third paragraph.

17 Q (BY MR. ELY) And can you read this paragraph, please?

18 A Greg, we honestly have been more challenged here as to  
19 demonstrating work in place as compared to our draws, given  
20 the way our draws and budgets were set up with the lender.  
21 They don't, for purposes of isolating phase 6, match up to  
22 show accurately what work has been done.

23 I have attached a schedule for work complete, which  
24 is a hybrid of our draw request. This is what we can opine to  
25 as work in place as of the fire. You have been provided photo

1 logs as well as daily reports and aerials. Obviously we need  
2 to agree on the percent of work in place as of the date of the  
3 loss.

4 The items that will be subject to clarifying are not  
5 that difficult but will require further discussion. I might  
6 suggest, with your permission, I have a call with Troy Wilson  
7 as to establishing a protocol to move the process forward and  
8 discuss his suggestions on how to get there.

9 Q So tell us what's going on and what all that means.

10 A Stuart Fred from Bomasada is saying we cannot -- we're  
11 having trouble documenting what level of completion we were at  
12 at the time of the loss. And what he's saying here is all the  
13 phases 1 through 5 for the -- you know, for the initial  
14 project value, which was roughly \$35 million, it's all lumped  
15 together as one. They didn't break out phase 6.

16 So he's saying based on the pay apps and what they  
17 paid, it doesn't accurately reflect the amount of work that  
18 was actually done in phase 6.

19 Q Okay.

20 A One comment was this was the first time that he ever  
21 supplied us with a percent complete for phase 6. This was one  
22 sheet that was broken out with percentages by trade. And in  
23 reviewing it, summarizing that specific percent complete  
24 provided by him represented that phase 6 was roughly 54  
25 percent complete at that time.

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1 Q Okay. And so as of this day on January 29th, 2019, the  
2 documents we're talking about, documentation we're talking  
3 about, that's -- those were the topics of information  
4 requested in the request for information back in October of  
5 2018, correct?

6 A Correct.

7 Q Okay. So when did Bomasada finally provide responses to  
8 the October 10th request for information with documents that  
9 assisted in actually determining what was in phase 6 at the  
10 time of the loss?

11 A So February 5th was the first real substantial  
12 documentation we received. We received pay app 34 and 35,  
13 which 35 was the last pay app that was reviewed prior to the  
14 fire. That was on August 20th of '18.

15 He provided photos, some daily logs, and he also  
16 provided a percent complete again, which was what, roughly  
17 five, six days later. Now the percent complete that he's  
18 claiming in phase 6 was 62 percent.

19 Q Okay. So one of the things that he mentions in this  
20 highlighted photograph or the highlighted part of the letter  
21 says they don't, for purposes of isolating phase 6, match up  
22 to show accurately what work has been done.

23 Was one of the problems that -- with the Bomasada  
24 documentation is that they didn't split out what work was --  
25 what payments were being made for what phases?

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1       A       Right. Yeah. We did not see what payments were being  
2       made for each phase. It was just pay apps were submitted,  
3       subcontractor pay apps were submitted, and it was just for  
4       work that they were doing related to all phases.

5               So they didn't break out exactly for what phase it  
6       was for.

7       Q       And you used the word "pay apps," and I know we've been  
8       over it before. But what information are you getting from a  
9       pay application or pay app?

10      A       A pay app is going to show the amount of money that's  
11      being requested for that time period, and it's also going to  
12      show the level of completion based on each trade for the whole  
13      project.

14      Q       Okay. And so during this time period, it wasn't like  
15      Travelers was not trying to come up with Xactimate estimate of  
16      the damage, correct, even though it wasn't getting information  
17      from Bomasada?

18      A       I said earlier we were trying to. During that December  
19      3rd meeting, it was agreed upon with all parties that  
20      Xactimate would be utilized to estimate that loss. Like I  
21      said, Stuart Fred had expressed concerns about how the  
22      information would be tracked and provided. And as you can see  
23      from here, he was still having issues trying to show the level  
24      of completion.

25               So we were trying -- we had completed as much as  
                  823

1 possible at this point, but we could not finalize it until we  
2 received the information that we requested or at least the  
3 majority of it.

4 Q Well, is it also true that there was some communication  
5 about that phase 5 was in a similar state as phase 6? Because  
6 the problem with phase 6 it burned to the ground and you  
7 couldn't tell what was in it, right?

8 A Right. So as I stated earlier, it was stated during our  
9 initial inspection on October 3rd in the construction trailer  
10 with the Bomasada representative that was on site daily that  
11 phase 5 and phase 6 were about at the same level of  
12 completion.

13 So based on the initial walk-through by J.S. Held on  
14 October 8th through the 10th, they had completed the Xactimate  
15 estimate based on phase 5 as far as they could. But there was  
16 still information we needed to finalize that estimate.

17 Q Okay. And so when did you finally receive the  
18 information from Bomasada? I believe you said -- was it  
19 February 5th?

20 A February 5th we received the information that I just  
21 went over, and then February 20th, we received another large  
22 dump of information that received the initial -- it was the  
23 initial construction contract, more subcontracts, pay apps,  
24 daily -- well, no more pay apps. I apologize. Daily logs,  
25 photos, schedules. So we received a lot more then.

1           Based on the information we received then, J. S.  
2 Held worked on finalizing the estimate as good as they could  
3 based on the information provided to date.

4       Q     So, Steve, with respect to -- you were able to finally  
5 make a payment on March the 13th, 2019, correct?

6       A     Correct.

7       Q     And this is -- and you provided an Xactimate estimate  
8 for the basis for the payment, correct?

9       A     Correct.

10      Q     And, again, this is an example of the detail that was  
11 provided at the time?

12      A     Yes. This goes through in tremendous amount of detail  
13 by area, by room. If you zoom back out, I mean, you can --

14           MR. ELY: Flip through the pages for me, three or  
15 four pages.

16      A     Right. This has to be over a hundred pages.

17      Q     (BY MR. ELY) All right.

18      A     So --

19           MR. ELY: Go to the end of it, Chris, and we'll see  
20 how long it is. No, don't go through that.

21      Q     (BY MR. ELY) So payment was made on March the 13th of  
22 2019, 164-page estimate, correct?

23      A     Correct.

24      Q     A payment was also made on phases 1 through 5 as well.  
25 Xactimate provided for that as well?

1 A Correct.

2 Q Okay. So let's fast forward to Defendant's Exhibit 14.  
3 May 1st of 2019.

4 Tell me what you recall about this letter.

5 A Well, this was a letter from David Johnson from Maxus  
6 that's making us aware that there is evidence of smoke and  
7 soot damage in phases -- well, it says in the buildings that  
8 survived the fire. Based on the ATC inspection, we already  
9 knew there was some issues with that in phase 5. So it was  
10 making us aware of additional soot, char issue that they're  
11 finding in phases 1 through 4.

12 And then also he's letting us know that there's  
13 extensive water damage to the subfloor in phase 5 building  
14 that he's saying will require replacement.

15 Q Okay.

16 MR. ELY: Let's go to Defendant's Exhibit 10. We're  
17 getting into these lawyer letters that we've referenced  
18 before. Next page, please. Next page, please. Third  
19 paragraph.

20 Q (BY MR. ELY) So at this point, Steve, May 13th of 2019,  
21 Travelers' communications and responses to Mr. Johnson's  
22 letter are coming through counsel, correct?

23 A Correct.

24 Q Okay. And in this letter, take a look at it and tell me  
25 what Travelers was doing in terms of the new soot and char

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1 claims that were made in the May 1 letter?

2 A So we're acknowledging that the May 1st letter has  
3 identified possible issues with soot and char in other  
4 buildings, and they've employed a company to perform testing.  
5 So that's where we asked them to help move along the  
6 investigation of these issues. We asked that we be allowed to  
7 inspect at the same time as their expert.

8 I mean, at this time they've identified -- they've  
9 informed us they've hired a company. They haven't let us know  
10 who, but we're saying, look, to help the investigation move  
11 along in the process, you know, let us know when you're going  
12 out there, and we'll get it -- we'll have our expert. We'll  
13 go out there and we'll do it together.

14 Q Okay.

15 MR. ELY: Back out of that, please. Go to the  
16 fourth paragraph, please.

17 Q (BY MR. ELY) And this dates to the water damage issues  
18 that were raised in the May 1 letter. Is this Travelers'  
19 response to those at that time -- to those claims at that  
20 time?

21 A Yes. Because in Mr. Johnson's letter, he states there's  
22 extensive water damage to the flooring in phase 5. We ask  
23 that they forward any documentation relating to the evaluation  
24 of that damage or documents that are relevant to it so we can  
25 determine how we're going to handle that.



1 Q So let's go to Defendant's Exhibit 15, third paragraph,  
2 please. Letter from Mr. Abrams to me.

3 Have you seen this letter, Steve?

4 A Yes.

5 Q Okay. So tell me what response Travelers received from  
6 Maxus to its request to accompany industrial hygienists or a  
7 testing company, whoever it may be, out to the site?

8 A Right. So that request was made on May 13th. Now, on  
9 May 28th, we're being informed that the Howarth Group was  
10 retained, and also an environmental hygienist has been engaged  
11 to determine the extent of the environmental issues.

12 There again, they're not named. They've already  
13 inspected the property. And later we find out that actually  
14 that hygienist, who turns out to be FBS and Tom Irmiter, they  
15 were actually -- they actually ended up inspecting the loss  
16 again on June 30th, two days after this letter.

17 Q You mean May 30th?

18 A Yeah, I mean May 30th.

19 MR. ELY: Let's go to Plaintiff's Exhibit 307.  
20 Judge, I know we're bumping up. You can stop me whenever you  
21 want.

22 THE COURT: How far along are you?

23 MR. ELY: I've got a little ways to go, I'm afraid.  
24 But I can stop at any point you want me to.

25 THE COURT: Sounds like you're asking for help here.  
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1 MR. ELY: No, sir, I'm not. No, sir, I'm not.

2 THE COURT: Well, I planned to break for the day  
3 around 4:15 or so.

4 MR. ELY: Okay. I'll keep going.

5 THE COURT: Well, it's up to you.

6 MR. ELY: Yes, sir.

7 Q (BY MR. ELY) So, Steve, you remember seeing this letter  
8 from me to Mr. Abrams on June 6th?

9 A Yes.

10 MR. ELY: Second paragraph, please.

11 Q (BY MR. ELY) So in this letter, we've got -- and  
12 Mr. Spicer has been retained. Who at Travelers retained  
13 Mr. Spicer?

14 A Greg Bynum.

15 Q Okay. Had you ever worked with Mr. Spicer before?

16 A No.

17 Q Had Greg?

18 A No.

19 Q And in this letter, Travelers invites Maxus' experts to  
20 accompany Mr. Spicer on any inspection -- or the inspection on  
21 June 13th, correct?

22 A Correct.

23 Q Okay. So let's go to Plaintiff's Exhibit 311. This is  
24 my letter to Mr. Abrams on June the 12th that has been  
25 referenced earlier in the trial, and I want to start -- take a  
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1 look at the whole letter.

2 So let's look at the second paragraph. This is in  
3 response to request for input on potential tenant eviction.  
4 Do you remember that?

5 Let's go to the second paragraph, please.

6 Okay. So the date of this letter, June the 12th,  
7 Chris Spicer is coming out the next day on June the 13th,  
8 2019. Can you read that letter for us, please, or that  
9 paragraph?

10 A First, Travelers' investigation into the claim is  
11 ongoing, and it has scheduled an inspection of the premises by  
12 an industrial hygienist tomorrow, June 13th, 2019. Once the  
13 industrial hygienist has inspected the premises, he will need  
14 an opportunity to analyze the information he obtains in the  
15 inspection, review, and analyze Mr. Irmiter's report and  
16 recommendations and perform his own evaluation.

17 Q Next paragraph, please. Read that paragraph for us.

18 A Until such time as the industrial hygienist has  
19 completed his evaluation and Travelers has an opportunity to  
20 consider that information, Travelers is not able to set forth  
21 its position regarding what coverage may or may not be  
22 available for relocation of the residents.

23 Q Okay. Next paragraph that's been highlighted before a  
24 couple of times.

25 A Second, please note that Travelers' review of any

1 industrial hygiene opinions offered by Mr. Irmiter and whether  
2 any relocation or evacuation of the residents is reasonable or  
3 necessary will be undertaken for the sole purpose of  
4 determining whether any costs associated therewith would  
5 qualify for coverage under the terms of the above-referenced  
6 policy. Travelers has not undertaken and will not undertake  
7 any technical, feasibility, safety, or other review of the  
8 report or opinions of Mr. Irmiter. Therefore, Travelers  
9 cannot and does not take a position regarding the alleged  
10 necessity of instructing the residents to vacate the premises.

11 Q Next paragraph, please.

12 A Travelers continues to reserve its rights during the  
13 course of the investigation, including but not limited to  
14 regarding coverage issues related to any costs associated with  
15 relocation.

16 Q So with respect to the request for guidance on whether  
17 to evict the tenants, which is essentially how it's been  
18 characterized, in your experience, is that something that  
19 Travelers as an insurance company ever does?

20 A No.

21 Q And with respect to Travelers' role in this entire  
22 process, can you explain to us how Travelers views its role  
23 with regard to this -- in this particular context with this  
24 property loss and what it was -- what role it played?

25 A We're there to apply coverage per the policy conditions.

1 Then once we do that, we're there to estimate the damages on  
2 making the -- putting the insured back to where they were at  
3 the time of the loss.

4 So we're evaluating any damages, any losses  
5 resulting from that. We're working on estimating those,  
6 working with sometimes their contractor to come to an agreed  
7 repair cost. Here we are trying to get information to  
8 determine the cost to put them back at the time of the loss.

9 And where necessary, if we're not sure if there's  
10 damage or not, in this situation we might hire an expert to  
11 help us evaluate the --

12 Q Okay. Let's go to Defendant's Exhibit 16.

13 So 6/12/2019 was my letter to Mr. Abrams that we  
14 just read. We heard Mr. Spicer earlier today. He's out on  
15 June the 13th, 2019. And you remember seeing a copy of this  
16 letter?

17 A Yes.

18 Q And the date of that letter?

19 A June 14th, 2019.

20 Q Okay. So you were here for Mr. Spicer's testimony  
21 earlier today, and Mr. Spicer generated a report on or  
22 around -- I think Mr. Abrams introduced it July 31st, August  
23 1st, August 2nd timeframe. And explain why that report of  
24 Mr. Spicer was not provided to Maxus in that August timeframe?

25 A Well, we retained Mr. Spicer because of the FBS report  
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1 that we received in June. And if you recall, that FBS report  
2 laid out that there was soot and char throughout phases 1  
3 through 4 that required remediation and also stated that there  
4 was extensive damage to phase 5; that his opinion was the  
5 building should be torn down and rebuilt.

6 So up until this point, we had no indication from  
7 anyone from multiple site visits, discussions with the  
8 insured, that there were any issues in phases 1 through 4. I  
9 mean, they continued to rent right up until the time that this  
10 letter was sent.

11 So there was clearly a disconnect between the scope  
12 of damages from when we were last out there. So we retained  
13 Chris Spicer, and we let the insured know is, look, our expert  
14 has to come out and take a look at it to verify if we're going  
15 to be -- if we're in agreement with the opinions provided by  
16 Tom Irmiter in his FBS report.

17 Q Okay.

18 THE COURT: Would counsel approach the bench?

19 MR. ELY: Yes, sir.

20 (Counsel approached the bench and the following  
21 proceedings were had:)

22 THE COURT: Who do you have next?

23 MR. ELY: Who do I have after him today?

24 THE COURT: No.

25 MR. ELY: Tomorrow I have an expert witness who will

1 not be as long as today. I have two fact witnesses who will  
2 not be nearly as long. They will -- that's who I have left.  
3 I have one witness left, one expert witness that will be on  
4 Wednesday.

5 MR. ABRAMS: So who is who?

6 MR. ELY: Batterman, Stakely, and Brad Stiles  
7 tomorrow. And then Mulder on Wednesday.

8 MR. ABRAMS: Then we have three rebuttal witnesses  
9 on Wednesday.

10 THE COURT: Are you going to be able to get that  
11 done?

12 MR. ABRAMS: I think so. It will be tight.

13 MR. ELY: Mike's experts, I will just say from a  
14 cross standpoint, I don't think they're going to be extensive  
15 unless they opine new information.

16 I don't think those are going to be extensive  
17 cross-examinations. The ones we've bitten off today were the  
18 biggest. I've got one -- my engineer expert on Wednesday.  
19 He'll take a little bit, but I'm going to plan to try to get  
20 him up and down as quickly as I can.

21 THE COURT: How much longer do we have with him?

22 MR. ELY: 20 minutes, 15, 20 minutes.

23 THE COURT: Why don't we finish him tomorrow. The  
24 jury is getting tired.

25 (The proceedings returned to open court.)

1 THE COURT: Are you ready to go home? The  
2 expressions tell me that. I want to make sure I'm reading you  
3 right.

4 We're going to stop for the day and start fresh in  
5 the morning. We're still on schedule as far as I can tell.

6 Again, I'll ask that you not discuss this case among  
7 yourselves or with others as per the instructions.

8 Any questions?

9 Have a good evening. See you back at 8:30 tomorrow.

10 (Court adjourned.)

11 REPORTER'S CERTIFICATE

12  
13 I certify that the foregoing pages are a correct  
14 transcript from the record of proceedings in the  
15 above-entitled matter.

16  
17 \_\_\_\_\_  
18 Date

\_\_\_\_\_  
/s/Gayle M. Wambolt  
GAYLE M. WAMBOLT, CRR, RMR  
United States Court Reporter